

THE GEOGRAPHICAL MAGAZINE

VOLUME VII, NO. 4

ONE SHILLING MONTHLY

AUGUST 1938





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The Creation of the Fifth Sun

A Mexican Pageant

by CARMEN COOK

In The Geographical Magazine for July 1937 Mr Rodney Gallop emphasized the predominance of Indian blood in Mexico, and mentioned that two million Mexicans still speak the Aztec tongue. It is, indeed, impossible to understand what is happening in Mexico and Central America today without reference to the ancient, underlying Indian cultures that preceded the Spanish conquest. Nationalism, there as elsewhere, draws sustenance from the tradition of a glorious past; and in order that our readers may be enabled to reach a more just appreciation of present trends in those countries, we shall direct their attention, in a series of articles, to the monuments of former grandeur with which the Aztec ceremonies recently revived by the Mexican government form so striking a link.

ON the 26th of July 1507, or according to the Aztec calendar on the 4th day *Acatl* (reed), when the Spanish conquerors were already treading American soil, the ancient Aztecs, unaware that it would be for the last time, were going through the ceremonies of the Renewal or Creation of the Fifth Sun, fearing that the world might be destroyed once more. For according to their tradition the majestic sun, Tonatiuh, had already destroyed the world four times and rebuilt it each time.

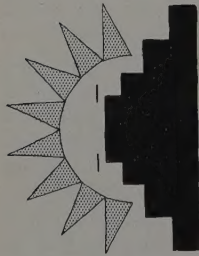
In order to implore a further lapse of 52 years for humanity, the people brought Tonatiuh sacrifices. Everyone took part, bringing personal sacrifices to appease the angry god. Household furniture was broken up and the fires in every home were put out. Men, women and children prayed and fasted. Women cried and wailed.

On the evening of the last day a long procession of people moved towards the nearest hill. On the summit of the mountain a youth waited—he was to be sacrificed. By the acceptance or refusal of this sacrifice the great god would speak to the people, for in the warm blood of the victim the new sacred fire would be kindled. Midnight was awaited amid the sad chanting of the priests, answered by the wailing of the people. Then the victim was prepared and the high-priest picked up the *tecpatl* or sacrificial knife, and with sur-

prising dexterity cut out the youth's heart. With tremulous hands he held the beating heart towards the dark heavens, while two priests proceeded to kindle the holy fire in the very wound of the victim. One of them placed a small block of soft wood in the hollow of the removed heart; the other placed a hard stick on the block, causing the end to whirl rapidly into the soft wood. By this means a spark of fire was produced and carried quickly to a nearby pile of dry wood. The rising flame was welcomed with joy, because this was the sign that life had been prolonged for another 52 years. This bloody scene is represented in the *Codex Veletri*, fol. 34.

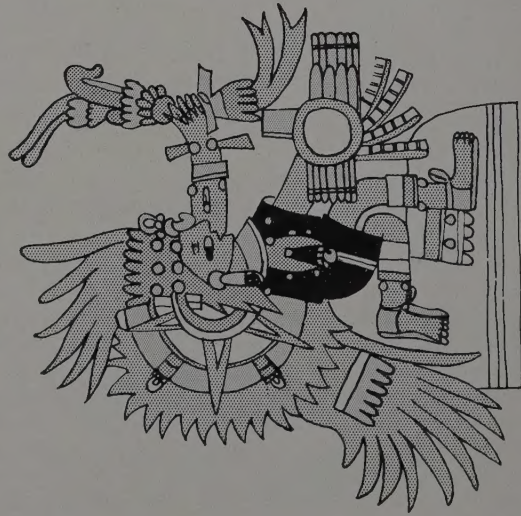
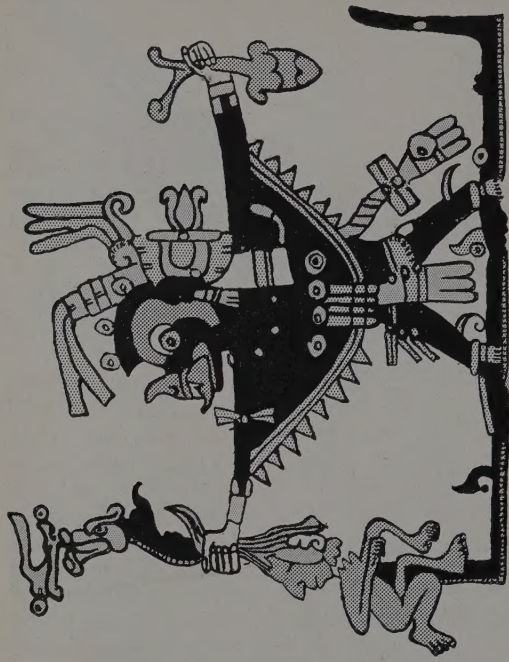
The belief that blood must flow was probably founded upon the philosophical ideas of poets or thinkers, as we may surmise from poems which lived in the memory of the people when the Spanish monks arrived.

These philosophers observed the birth of the day and the death of the sun in the evening and compared the combat between the sun and stars, between day and night, with the struggle between Good and Evil. The strife was a constant one, until the sun was forced to retire, wounded and covered with blood, into the Land of Shadows. This blood which the sun lost in his daily battle against the demons had to be replaced by food which man had to



SACRED HIEROGLYPHS OF THE AZTECS

Costumes and ceremonies in the National pageant organized by the Mexican government are based on the Mexican codices, pictographic Aztec manuscripts preserved in the National Museum, Mexico City, the British Museum and the Vatican and Bodleian libraries, from which these figures are taken



Mask of the
Summer Breeze,
Quetzalcoatl

bring him, because it was for mankind that Tonatiuh fought this daily battle and shed his blood. The people wondered:

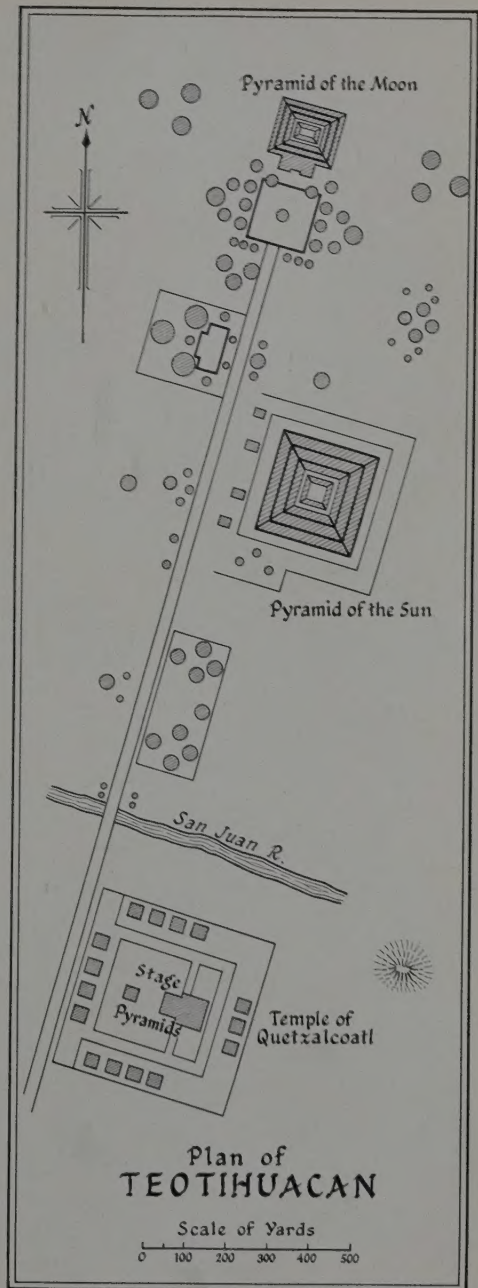
"... But can we offer the Creator and Preserver of Life ordinary food? Food which men and animals eat? To the God who has power over us we must offer the best we can give... our very lives, our beating hearts, our warm blood. This blood, the blood of our life, Tonatiuh must suck up to replace the blood he shed for us, so that next morning he may be borne anew by Mother Earth, young and victorious, after a long battle with the stars, which he must kill one by one as they disappear in the dawn."

Carried away by this idea the Aztecs developed into a purely martial people, because war supplied them with the necessary victims for sacrifice. The desire for blood grew to fanatical extremes. The Mexica and the Tlaxcalteca, both people of the Aztec race, carried on a continuous war with each other when it was not possible to bring one about with other peoples. This war was called *xochimecaliztli* (the war of flowers).

The Aztecs were called by a new name, spoken with reverence by other peoples. They were called the 'Tribe of the Sun'. The thoughts of dreamers had turned into reality, drenched in bloody poetry. The legend was carried into mythological realms and created the celestial deities, Sun and Moon, through the sacrifice of the human, the mortal.

To awaken these long-forgotten traditions, which through the centuries have lived only in libraries and museums and were once destroyed by a cruel conquest, the Mexican government have reconstructed a pageant, using the codices as a basis for the costumes and ceremonies. It is their desire to repeat the festival every 26th of July.

To carry out these plans, what place could be better suited than the ancient Temple of Quetzalcoatl, now restored





All photographs by P.A.F.

The pageant is held at Teotihuacan, near Mexico City. Reviving the splendour of ancient Aztec ceremonial, it attracts thousands of spectators. Parked cars within sight of the Pyramid of the Sun

under the special care of Mexican archaeologists with the material and remains found on the site? The Temple of Quetzalcoatl is in the ancient Indian city of Teotihuacan, reached in about an hour's time by road or rail from Mexico City. The temple consists of a large square, each side of which is more than 430 yards long, bounded by pyramids and platforms on all four sides. A line running through the centre of this temple and the centre of the Pyramid of the Sun, also in Teotihuacan, is the axis of the city, and does not, as in other Indian cities, run from north to south, but shows a north-easterly deviation of about 17 degrees.

Archaeologists have tried to explain this deviation and some believe that the line coincides with the passing of the sun through the zenith of the city of Teotihuacan twice a year, once in May and

again on the 27th of July, the day which marks the beginning of the new year in the Aztec calendar. Then all perpendicular objects lose their shadows and the Indians said: "Tonatiuh is sitting on the summit of the pyramid; he has come down to us". And they often drew Tonatiuh with the body of an eagle, rushing head first towards the sacrificial bowl.

The landscape of San Juan Teotihuacan is typical of the Mexican Anahuac Plateau. The ancient city lies in a small valley surrounded by hills. Shadow is scarce, there are few trees, but there are some very large and beautiful cacti. The land seems to have bared itself entirely to the sun. The ancient city itself is uninhabited, but there is a small village of Indians not very far away, hidden among some trees.

Such is the history of the Fifth Sun and such is the place where it was urged

to remain and gladden the hearts of humanity.

The music accompanying the pageant was composed by Francisco Dominguez and adapts itself easily and gracefully to the time, the costumes and the people. His modern music alternates with the weird drums and fifes of an authentic Indian orchestra.

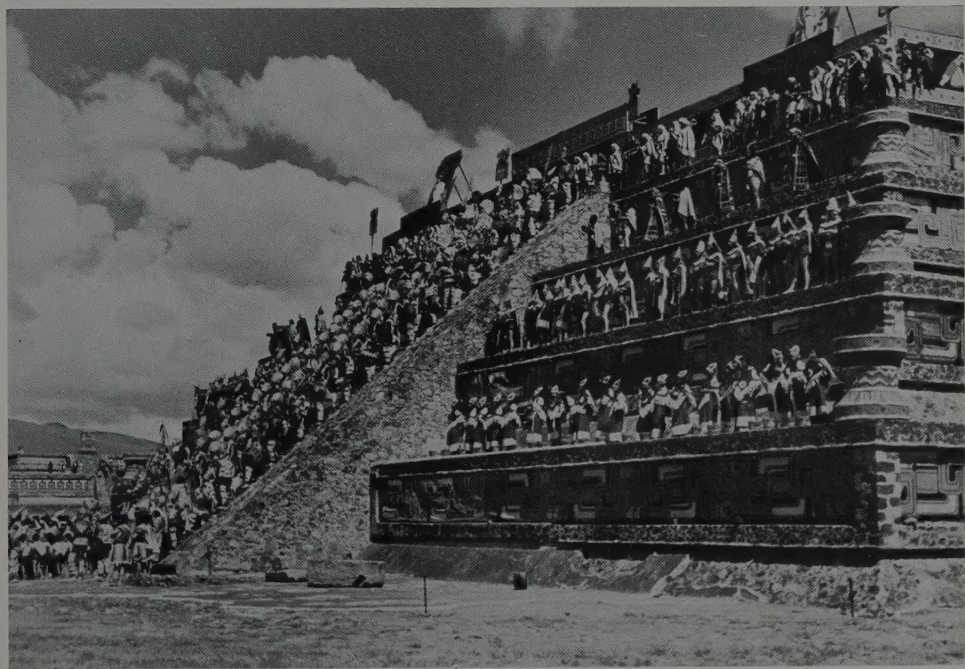
The main pyramid and the smaller pyramid in the centre are used as stages, and the surrounding walls and pyramids hold the audience, which flocks in thousands by car and train. Both stage pyramids are decorated in earthy, intensive colours and large Aztec designs. About two thousand people perform, chosen from among the best of the police force and firemen, and the most beautiful girls in the Government schools. The costumes are glamorous in colour.

THE CREATION OF THE FIFTH SUN

The picture as a whole seems like a rich embroidery, upon which the tinted dots move to and fro, ever forming new effects.

Here is the scheme of the pageant as it is played. Eight high-priests appear on the scene dressed in magnificent clothing. They wear built-up masks. A large number of priests follow, carrying the sacrificial objects. A court of maidens and warriors follows the priests to the small pyramid in the centre, which symbolizes the sun and glitters with coloured sand. Here the ceremonies and sacrifices take place. The oldest high-priest, personifying *Huehuetotl* (The Old God), lights a fire while the pyramid is alive with the Dance of the Sun.

Now the high-priests bring forth their sacrifices. They sacrifice 'twigs from the trees, fruits, hayballs, thorns from the



The pyramids of the Temple of Quetzalcoatl, specially reconstructed with Aztec designs, serve as stages and as galleries for spectators. The largest is occupied by the Aztec Emperor and his court





Among the 2000 performers some of Mexico's most beautiful girls, chosen from Government schools, portray various groups of characters. (Above) Maidens of the Princess's court



(Right) Dancers who execute ritual dances in honour of the new sun. (Left) A group personating bees, the sun's assistants in bringing fresh life and fertility to the earth



Owing to the non-survival of any pre-Spanish Indian music, special music for the pageant was composed by Francisco Dominguez; but reconstructions of the Aztec drums and the strains of present-day Indian dancers (below) gave an air of authenticity to the music of the pageant





A drummer, whose instrument the Aztecs called huehuetl (the old old one). It was used for drowning the cries of sacrificial victims and its 'accursed sound' was referred to by Bernal Díaz who witnessed the taking of Mexico City



The Temple of Quetzalcoatl, a quarter of a mile square, makes a splendid setting—

agave dipped in blood, aromatic essence and birds'.

Tecutzintecatl (He Who Belongs to the Rank of the Lords) steps forward; his bearing is majestic, for he is the richest priest in all the realms reached by Aztec power. He speaks: "I who am the most magnificent will bring my sacrifice first. The richness of my gifts will gladden our God and will brighten the fire for the other sacrifices; that cannot be as welcome as mine."

The other priests murmur assent and *Tecutzintecatl* deposits his gifts into the fire. He brings 'rich feathers (*maquetzalli*) instead of twigs; balls of gold instead of balls of hay; thorns cut from beautiful gems instead of thorns of the agave; thorns of coral instead of thorns dipped in blood; and the *copal* (incense) he brings is good'.

Nanahuatzin (He Who Speaks Selected Words), the most humble of the high-priests, does not speak. He stands aside

and seems to be meditating. When all the high-priests have brought forth their sacrifices he is called by *Huehuetotl*. He answers: "I have poured all my soul into my prayer so that our sacrifices may be fruitful". He then steps forward and sacrifices 'green corn-reeds bound three and three, instead of twigs; he brings balls of hay and thorns of agave dipped into his own blood'.

The high-priests now prepare for the purifying fire-death by which one of them must die, thus creating, through this sacrifice, the new sun. They look around and *Tecutzintecatl*, the magnificent, offers himself: "It is my duty to bring light to earth. It suits no one better than me, who shine in magnificence on earth, to shine likewise in the heavens."

Everybody is in favour of this sacrifice. But the Moon must also be created through a second sacrifice. Another volunteer is needed. The high-priests confer and then speak to *Nanahuatzin*: "Nanahuatzin, will



—for pageantry that must closely resemble the scenes enacted there 400 years ago

you be the light in the darkness of the night?"

The humble man obeys without hesitation and answers: "My heart sings with gratitude and rejoicing".

The high-priests form two columns on the sides of the fire. Huehuetotl calls to Tecutzintecatl: "We await in gratitude the greatness of your sacrifice".

At once Tecutzintecatl steps proudly towards the fire, but as soon as he feels the heat on his face, he grows afraid and steps back. He attempts four times to overcome his fear, but it seems impossible. The high-priests take counsel; after recognizing the impossibility of overcoming Tecutzintecatl's fear even through their encouraging words they turn towards Nanahuatzin and beseech him to step into the fire. He obeys and immediately disappears amid the flames. Tecutzintecatl's pride is touched by this act of valour and he follows Nanahuatzin into the flames. Yet he will never be the Sun he had chosen

to be, as he was not the first to enter the fire.

The high-priests now relax and await the grace of the Sun God. The music plays a soft melody suggesting the clearing-up of the horizon. At last the Sun appears on the summit of the pyramid, to the right, in the form of a beautiful youth dressed in magnificent clothing. Behind him a large Aztec Sun sends forth bright rays. Overpowered by the lustre, the priests humbly prostrate themselves before the young Sun God. The hymn of the Sun is sung by hundreds of rejoicing throats. Joy turns into ecstasy, and the people dance around the pyramid. The creation of the sun has been achieved.

The general exhilaration turns into terror when the priests observe that the Sun does not move. They shoot arrows upon the Sun God and petitions are sent up to him. The dancers join the priests in their plea and when the Sun at last starts moving the rejoicing is redoubled.



Symbolism strongly marks every phase of the ceremony. (Above) Peasants dancing to celebrate the fecundation of the earth by the new sun—



—and (left) a dramatic moment when the Sun God is observed to be standing still. The priests shoot arrows and send petitions to make him move

The sowers and peasants dance to celebrate the fecundation of the earth by the new Sun.

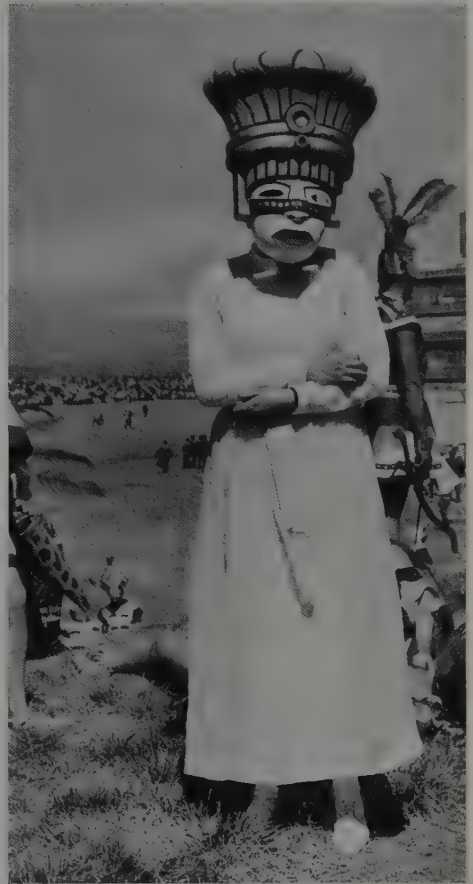
Now that the Sun again brightens the day, it is necessary that the Moon be created likewise. The priests turn to the Sun and pray for the appearance of *Meztli*, the Goddess of the Moon, who soon appears at the left side of the large pyramid, personified by a regally dressed maiden. In the background are the hieroglyphic signs of this luminous body. A group of maidens dance in honour of the goddess. The first part of the pageant ends here.

In the second part, praise is sung to the courage and valour of manhood. The stage pyramids are now changed into the arena for the gladiatory battle. The people representing the public enter the large square in hurried disorder, laughing and enthusiastic, for the scene they expect to have brought before their eyes has been the talk of weeks. Betting goes on and those who have nothing else stake their wives and children. The rich people stake feathers from rare birds and pieces of cloth, jewelry and clothing. The spectators arrange themselves as best they can and await with impatience the entrance of the court. Soon the train appears, knights and lords in the lead. The high-priests and princes follow, as well as the nearer relatives of the Emperor. The people break out in exclamations of enthusiasm when the Princess and her court enter and are hushed in awe when the Emperor himself appears in his richly ornamented litter.

After the Emperor and the court have seated themselves on the large pyramid the spectacle begins. The Eagle Knights contend against the Jaguar Knights. The battle, man to man, surrounds the small pyramid. One by one the Eagle Knights fall and victory seems to lean towards the Jaguar Knights. The Emperor soon decides in favour of the Jaguar Knights and the brave leader of the Eagles is brought

before the Emperor who grants him the gladiatory death, an honour bestowed only upon the most valiant. The defeated knight is led towards the centre of the small pyramid and there one of his feet is bound. His damaged weapons are handed to him and he must now fight against whatever Jaguar Knights have survived the battle. The uneven fight begins. In his condition the Eagle Knight can only defend himself and strike when attacked.

The people follow the battle with



The moon, like the sun, must be 'renewed': the Moon Goddess, personified by a maiden wearing a crown-capped mask of Aztec design



The Eagle and Jaguar Knights do not only represent the manly valour of the Aztecs: eagle and jaguar symbols appear both in the Aztec temples (notably at Malinalco) and as signs of the Aztec Calendar where the eagle denotes bravery in war and the jaguar success in love and war

enthusiasm and the cries show that the public is in favour of the brave Eagle Knight:

"*Xicihui, xictehui* (Go on, hit him)."

"*Axcale, xicmiti inin ocelome* (Now, kill those jaguars)."

"*Ah-ha-ha-ha ha-a-a-a-a.*"

"*Xiquinmicti* (Kill them)."

The unequal battle ends with the Eagle Knight's cry of victory and is answered by the people's: "*Manemi in Cuauhtli, Tocuahtli* (Long live the Eagle, our Eagle!)."

The Emperor covers the victor with honours and lists him in the ranks of the lords. He gives him presents consisting

of rich clothing, jewels and feathers. As a very special honour he then gives him his daughter in marriage.

The ceremony for the wedding is prepared immediately amid great rejoicing of the people who did not expect such an event. As everything ends with so much unexpected merriment, even the bets are gladly settled and possessions change hands. The maidens dance the nuptial dance accompanied by soft music which grows louder and louder as the ceremony ends, and the newly married couple happily rejoin the Emperor, who gives a sign, and the court and the people leave the arena in a long parade.

Places and Products

I. Staffordshire Pottery

by JOAN WOOLLCOMBE

There may be many reasons for the continued production of a particular commodity in a particular place: proximity to raw materials or sources of power, ease of transport, accessibility of markets; often because a group of men have built up a local tradition of craftsmanship strong enough to survive centuries of economic change. In the series of articles of which this is the first we shall meet with instances of all these relationships between places and products; as an example of the last-mentioned relationship the living tradition of the Staffordshire Potters remains unsurpassed

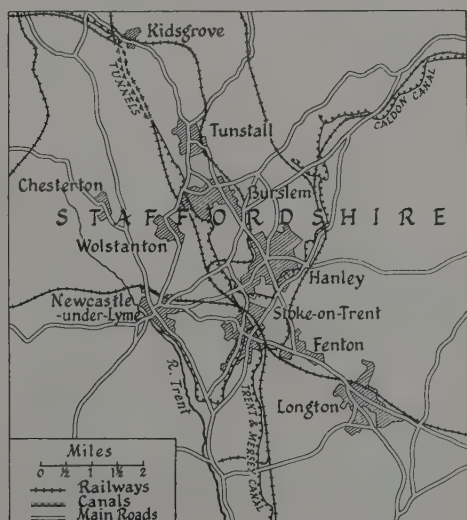
THE England of traditional, highly localized industries is supposed by some to have vanished. But they know little of industrial England who only, perhaps, know the Great West Road; there are districts where highly localized, deeply rooted and exceedingly virile industries show no signs, fortunately, of vanishing.

In North Staffordshire a chain of towns stretches through Longton, Fenton, Stoke, Hanley, Burslem and Tunstall more than half of whose total population—at a rough computation—has been engaged in the potting industry for the better part of two centuries. We have known this district of England as 'The Potteries' and been aware that in cross-section it exhibits characteristics of English industrial history, habits and practices that make it of tremendous interest. But the story of the Potteries is essentially the story of *people*: as opposed to the popular contemporary idea of the business magnate and innumerable anonymous factory hands. English potting is a matter chiefly of dynasties deeply rooted in local conditions; families that work in, as well as families that direct, the famous pot-works.

Shrewd in their conduct of business, stubborn in their attitude to outside disturbance, insolently proud of their technical achievements, the potters of Staffordshire went on potting though the turbulent history of the 18th and 19th centuries convulsed the world around them. Through wars and revolutions the evolution of fine

china continued: china made with the best bones, the best clay, fired with the best coal—to emerge the best china on the market.

Today, the main characteristics remain unaltered and the tradition of the potters continues as unbroken history. But it is essentially the history of human achievement and best explained in a 'close-up', as it were, from the whole 'film'. Concentrate on Stoke-on-Trent and further narrow the focus to the Spode-Copeland 14-acres of pot history. This 14-acres of pot-works is soaked in social, economic, technical and artistic history and tradition with roots two hundred years deep; great-great-grandsons working under great-



Stanford, London.

great-grandsons—with sons to take their place. The story of the Spode-Copeland dynasty and achievement is an epitome of the Potteries of yesterday and today.

GIANTS OF THE POTTING WORLD

Rapidly let the 'film' flash back two hundred years: to the Georgian Era and the Adam Period; to an age that knew nothing of large turnovers and quick profits, but was greedy for business success all the same; to a generation of thrusting Englishmen for whom the formidable Doctor Johnson, the younger Pitt, Burke, Robespierre, Gainsborough, Reynolds and Chippendale were yet to provide keen and varied excitements.

For the amazing story of the first Spode we go to the sparsely populated Midlands, to an age of different landscape as well as different social conditions. Before Josiah Spode the First died he had achieved two things that altered the world of potting: he had made underglaze printing a 'commercial proposition' and (even more important) he had discovered and perfected a formula for bone porcelain and bone china that set the standard throughout the world, founded the fortunes of his dynasty and his workers and altered the face of his county. Contemporary with the first Spode were two other giants of the potting world: Thomas Whieldon and Josiah Wedgwood the First. Whieldon, the simple, direct master of potting, opened to the two Josiahs different avenues leading through experiment to success: Wedgwood developing the classical to his enormous credit, and Spode, taking the wealth of oriental design and the simple directness of English taste and making of the two a pattern of form and decoration.

When young Spode was apprenticed to Whieldon in 1749 life in the Trent valley was slow in tempo although there was definitely a commercial 'spring in the air'. The prosperity and luxury that followed the Napoleonic wars lay far ahead, but everywhere were adventurous possibilities

in politics, art, literature, mechanics and commerce. The middle classes were beginning to extend their demand for fine goods; and young potters eagerly experimented with ware that would supplant the pewter, earthenware and utilitarian porcelain in English homes. In 1776 young Spode had advanced sufficiently to buy outright the Stoke Pot Works that he had previously managed; a little later he had the wisdom to develop his 'sales management' side and started his association with a tea merchant of London, one William Copeland.

WHAT SPODE THE FIRST ACHIEVED

Less than ten years later his first 'brain wave'—underglaze blue transfer-printing—was already a commercial success. And it is at this point that we are abruptly brought to the Pot Works of today, for the astounding thing is that you can watch this transfer-printing being done in the same way, with the same designs from the same plates, by men and women who are probably descendants of the workers of that first Josiah, in the Copeland works in 1938. The practical application of this method opened the door to tremendous possibilities, and Spode and his craftsmen greedily seized new designs and used or adapted them.

But the time was ripe for the perfecting of a new formula for the actual porcelain itself and potters everywhere were experimenting with the notion of introducing a proportion of calcined bones into the 'soft paste' porcelains, the body of which consisted largely of silica. Spode was not the first potter to use bone, but he was the only man to discover the ideal proportion of bone necessary to produce what, since his discovery, has become the standard porcelain formula. Imagine that moment on a November morning in 1794 when Josiah the First, after eighteen years' ferocious work, lifted from his oven (still in operation to-day) his first piece of perfect bone-ash porcelain. Six parts bone-



Photographs by Millar & Harris

The wealth of the Copelands: Devon and Dorset clay and piles of flint weathering in the open. These are some of the ingredients of the giant prescription for Spode-Copeland ware

ash (the best bones, marrow-full); four parts china stone, petuntse; and three and a half parts china clay, kaolin: this is the prescription ground slowly to powder in the mighty mills established by this first Josiah, and electrified by his successors as a gesture of defiance to panic, at the start of the World War of 1914.

A MILD MAN WITH VISION

It is impossible in a short article to do more than hint at the commercial and artistic developments that followed. The subsequent years were no times for the timid; but Josiah—a 'mild man' they called him—went steadily ahead through what has been described as 'the darkest hour in English history'. Businesses were failing around him; there were bitter political controversies and mutinies of the Fleet at Spithead and the Nore: there were rumours of invasion and (even worse!)

the Bank of England suspended cash payments. Spode went on potting and, what is yet more important to our study of his inheritance, went on coolly testing other possibilities connected with his business: the use of power, better transport facilities and expanding markets.

THE BEST COAL

To understand the importance of power to the potter one must watch the bench, mills, conveyors, wheels—everything that moves for grinding of raw materials, mixing of 'slip' (the plastic porcelain), shaping and finishing after firings. Coal was used for supplying the power and for firing the kilns—in Spode's case, always (and insolently) the best coal.

Then, communications. Roads and canals served Spode as vital arteries for the incoming raw materials and the outgoing finished goods. He was a keen



Inside a mill that, almost silently, crushes the materials to powder. A stage in the evolution of that 'slip' (plastic porcelain) which Dickens, when he visited these Works in 1852, described as 'grey dough'

turnpike: no altruist, he saw to it that neither suppliers nor customers should climb unnecessary hills. The Trent and Mersey canal comes right to the doors of his pot-works. Volumes might be written (and some have) on the interweave of geology, economics, transport, art and human aspirations that produced the Potteries.

SPODE II: A WORTHY HEIR

Josiah the First was successful where the great so often fail: he produced a suitable and worthy heir and, when he died in his 64th year, Josiah II continued to build a developing business. Spode the First, that mild man who had founded a business on the best bones, was succeeded by Josiah Spode of 'The Mount'—a vast house built in 1804 as evidence of success and background for the most lavish of all post-war

periods in English history. The era of the thatched pot-works had passed; and the 'film' shows us clattering coaches, flaring lights and, finally, the Prince of Wales riding up the avenue to The Mount.

A great deal of food (and drink) was consumed: and these enormous meals, this new standard of luxury, needed the platters of Mr Spode decorated in the increasingly rich styles—exotic, varied and collected from the ever-widening world—that the period loved. Riches of design literally pour into the works, are translated for English taste and remain to this day the famous patterns of the Spode-Copeland ware. The designs tell us a great deal about the times: the English had just begun to discover the fun of reproducing Nature and their own rural scenes, as well as the more mannered borrowings from the East.

The successes of the Spode-Copeland

works conditioned the immediate locality as we know it today: to Spode II goes the credit of having created the first potters' syndicate for raising coal in North Staffordshire; and other kindred activities, sometimes communal and sometimes dynastic, drove his roots further and deeper. Meanwhile, the countryside itself was changing: the world of the Industrial Era was closing in upon the men, women and children employed in the area of the Potteries.

There are upwards of twenty ovens [says a writer, of Burslem] which cast their salt or glazing at the same time . . . and thus occasion such immense and constant volumes of smoke as literally to envelop the whole neighbourhood . . . the scene has not ineptly been compared to the emissions of Vesuvius.

Yet it could still be written with truth that "from Stoke the prospect is extremely beautiful and a view so populous and at the same time so picturesque is seldom to be met with. . . ." Even today there is beauty in the tall chimneys, the squat kiln silhouettes and their reflections in the canal behind Spode's pot-works. The Potteries as a whole have one great advantage in comparison with other manufacturing districts, that, though they wind for some 8 miles along canal and river, they are seldom so wide that green fields are not within reach of their inhabitants.

Spode II died an extremely rich man in 1827, just before the more serious riots and reactions against the first constraints of the Industrial Age. He lies, as does his father, in grimy, solid masonry in Stoke Churchyard. The third Spode, who died soon after his father, seems to have been less of a potter than a keen business man interested in that vital commodity, coal. He left a successor, the fourth Josiah, aged six; but the child, inheritor of this wealth and tremendous tradition, did not follow it, and although the Spode connection was side-tracked the unbroken tradition of the Works was carried on by the vigorous Copelands. In 1867 William Taylor Cope-

land took his four sons into partnership and the firm became, as Spode lovers know it today, W. T. Copeland & Sons.

The little changed appearance of the Works themselves; the unbroken tradition of the processes; the undiminished firing (with the best coal) that still belches smoke from the kilns—all these make easy the transition from yesterday to today as the last post-coach clatters away and the hated 'iron road' solves forever the transport problems of Spode the First!

The transition is complete. We are inside 'the Works' of today. Tom Hassell, intimately connected with Spode-Copeland as any grandfather's grandson among them, is with us, taking us round. 'Throwers', 'turners', 'modellers', 'pressers', 'potters', 'casters', 'sagger-makers', 'painters and paintresses', 'gilders'—all are here, many of them bearing names familiar enough to Spodes I and II.

First, backing onto the canal, strangely white against sooty surroundings, the Real Estate of the Copelands: hundreds of pounds' worth of china clay and china stone—profits of the firm translated into the best raw materials for the future, weathering in the open. Later I am handed a porcelain plate and told to let it drop: against intuition, I do and it falls, rings true as a bell and rolls lazily to rest, unbroken. It costs 30 pence to produce and is, of its kind, perfect. It is worth seeing the stages by which the raw material, weathering here, becomes that plate.

MILL, WHEEL AND KILN

Potting depends upon the three 'machines' of the potter: first, the Mills. They grind almost silently for days—weeks—and they powder the raw wealth of the Copelands so fine with their granite surfaces that the crushed stone will pass through silk. This is the first stage of making up the giant 'prescription' of Spode I, and no considerations of cheap production have been permitted to hurry this process for two centuries.



A modern master-potter and his 'mate'; while she weighs the 'dough' the wheel spins between his knees. The tools behind him—odds and ends picked up at home—are characteristic of all potters



A layer of 'slip' is slapped down on the turn-table and shaped into a large dish by the potter who, here, is working on its underside. Decades of practice enable him to do his tricky and arduous work with apparent ease



Two kilns which date back to the first Spode. The pot-works cover 14 acres and are a maze of alleyways and workshops. This, the oldest part, is still called 'The Meadow'—indication of its origin

Stacking 'saggers' in a kiln which will presently be bricked-up for from 40 to 60 hours' firing. Saggers are coarse clay vessels in which plates are piled, or bone china pieces set singly in a bedding of sand



Skipping the intervening mixing for the moment, the next vital machine is the potter's wheel. Watch a master-potter and his woman assistant. She measures the damp clay by weight, he takes the damp lump on his turn-table, sets his wheel spinning and silently, effortlessly the shapeless mass rises from his hand-pressure, a vase, or whatever it is his intention to create. The young man, with the clear complexion of his craft, born and bred to his work; his 'mate', typical of the modern woman worker—together they form a perfect unhurried combination. A matter of ninety seconds' easy mastery of movement and a wet lump of clay is transformed into a teapot, shining and still almost shiveringly plastic. Another moment and an exactly fitting lid is created for it and, with a grin at his gaping audience of one, the young potter continues to create an endless succession of exactly similar vessels.

Again short-cutting intervening stages, we walk along a maze of alleyways to a kiln, a weathered brick structure glowing in the afternoon sun, that dates back to Spode I. Here, very carefully stacked in containers (saggers, of coarser clay, made specially for baking), are vessels for their first firing, ready to be baked into that state aptly called 'biscuit'. Plates are ingeniously piled: but bone china is set in silvery sand, with a sagger to each piece. The last loader crawls from the last square foot (so it seems) of space; the side of the kiln is bricked up and the inferno around slowly heated—with the best coal. For from forty to sixty hours skilled men constantly tend these fires; hundreds of pounds' worth of porcelain in their care. Then (another stage) the twenty or so hours of firing needed for the imposition of the perfect glaze.

These three 'machines' that grind, form and fire comprise the broad outlines of the potting: there are variations and permutations that go to produce the innumerable products, from the huge dishes to the deli-

cate moulded figures. It is worth the visitor's while to explore every possible detail and, more important still, to watch the men and women at work. For instance, a vast platter: a huge slab of raw material is raised on high and slapped down on its mould, spun and trimmed by a man who has been doing this work for decades and whom it takes years to train; whose muscles are developed for just this work and for just that flick of the arm which gives accuracy. Bone china plates: the worker bends tense over his spinning disc, pressing his special instrument that shapes the 'profile' of the underside; flying clay spatters his chest and face and those of his apprentice, as he bends to watch.

UNDERGLAZE TRANSFER PRINTING

Then, the underglaze transfer printing of Spode I, done in the same way, with the same plates, by the workers whose forbears, most of them, worked in these same works. The design, in this case the famous willow-pattern, is transferred onto the once-fired 'biscuit' by women workers. A wafer-thin damp sheet of paper is printed as an etching is printed, from the delicate copper-plate. Then it is whipped across to the women who—scissors and fingers working at full speed—cut the design to shape, fit it to its plate or cup or saucer, rub it on, give it a thorough washing and, as the wastage comes away, leave the design 'transferred'. After this the now-decorated biscuit ware is rapidly dipped into a solution of glaze before being fired, again, for that 20 hours—with the best coal!

The details, the method, the materials that Spode the First made into a 'commercial proposition' still remain and are still used.

Decoration can, of course, be done 'over' the glaze and there are other varieties and methods of decorating, including the delicate business of gilding. Elderly men experts, young women painters being trained, the oldest worker at his polishing lathe: all these are part of the body of



'Willow pattern' being transferred onto once-fired vessels, which will be glazed and fired again. Underglaze transfer-printing is still done by methods, and in the same designs, used by Spode I



A young modern 'paintress' puts the line round a plate with a faultlessly steady brush: her other hand controls her turntable. Girls and women paintresses are trained in the Spode tradition by the Art Director, Tom Hassell

workers carrying this tradition into the 20th century.

A FAMILY BUSINESS

There is not space, nor is this the place, to discuss the problems of modern marketing; the changes in foreign demand and the fierce competition from mass-produced goods. The advent of Union conditions (the first Potters' Union was formed in 1824) and the awakening, considerably later, of the local and national conscience regarding the housing of the workers are as much developments of modernization as was the electrification of the source of power in the early part of the War. But in the case of the Spode-Copeland business and certain other potting firms, 'paternalism' appears to have worked to make the relationship between employer and employed more intimate than is the case with businesses of swifter growth. 'Mr Ronald' in his shirt-sleeves comes out of his office as the

workers stream past at the end of the day: the fourth Copeland to control these fourteen acres that had seen four Spodes before the Copelands. The family attachment is not only at the top: there is one old man for whom the firm still finds whitewashing work and who has been with the Copelands an incredible number of years. He still pays his weekly money over to his wife as he has always done and, that duty performed, returns at once to 'the Works' for a solitary week-end in a shakedown he has used for years. He is only doing what in the past whole families did: they came and stayed, hotted up their meals over the stoves and, in due course, the younger members who hung around were taken on by the firm, eager for the best raw material in the potting tradition.

Skilled potters cannot be made in months: this business of being born and bred to potting is the secret of one of our liveliest, most productive and most strongly localized industrial traditions.



Plate and coffee pot in a traditional Spode design which owes much to borrowings from the East

Spring Festival

Among the Konyak Nagas of Assam

by DR CHRISTOPH VON FÜRER-HAIMENDORF

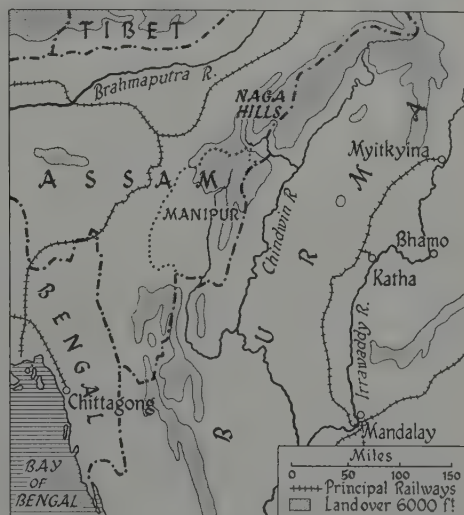
The landscape of the Nagas' country, their villages and their daily life, were the subject of an article by Dr von Fürer-Haimendorf in The Geographical Magazine for June 1937. This time his article and photographs convey a vivid impression of that great moment in the Naga year when the round of cultivation begins anew and every village unites to invoke the forces of fruitfulness; as well as of the types and personalities that characterize the Naga world

THE village of Longkhai is still asleep. The first grey light of dawn gradually lends shape and form to the houses which huddle together like a herd of giant animals on the narrow mountain ridge. They are large well-built houses. Mighty beams for the house-posts have been hewn from the forests surrounding the village, hundreds of palms have been robbed of their fan-like foliage to furnish the thick and sturdy thatch that keeps the heavy tropical rains at bay.

The far-stretching palace of the Chief is larger and longer than any ordinary dwelling and towers above even the three 'bachelors' houses'. For the labyrinth of dark rooms has to house not only the Chief himself with his wives and their hordes of children, but offers shelter and asylum to brothers and cousins and such of his subjects as are widowed or orphaned and therefore homeless.

Three times the cock has crowed from the rafters. In the separate wing where Liang, the Chief's royal daughter, sleeps with some of her girl friends, there is a stirring. One girl gets up, throws a log onto the glowing ashes of the hearth and kindles it to flame. The others begin to stretch themselves on the light, low bamboo beds that line the walls. They dare not linger long, for the rice has to be pounded for the morning meal and the huge mortar-table in the great hall is claiming them. When the pounding is finished, they place the husked rice in great earthen vessels on the hearth-stones.

Their next task is the water, and Liang also takes on her back a basket with five bamboo cylinders to fetch it in. She hurries past the bachelors' house which guards the entrance to the village, and down the steep stone steps that lead to the spring. The first rays of the sun, topping the distant Burma hills, have just caught the roofs of Longkhai. A sea of fog still rolls among the valleys, and waves of it still lap the ridges of the hills on which the Konyak Nagas have built their villages above the fever-ridden lowland. As Liang mounts again to the village, stooping under her heavy load of water, she is met by other girls who are off to the forest armed with *daos*, the hewing-knives of the





All photographs by Christoph von Furer-Haimendorf

The Naga hills on whose high ridges the villages of the Konyak Nagas lie. Every spring a great festival is held to induce prosperity for their crops and families

Nagas, to cut wood for the fires of today's great festival. For it is the women's job to see to fuel and water for the village.

Liang wastes no time over breakfast. A few mouthfuls of rice and taro porridge are enough; she must keep an appetite for the coming feast. In any case she is impatient to fetch forth the family's treasure of dress and ornament from the great storing-baskets which swing from the roof. She lays down large mats and spreads out on them all the coloured beads, discs of shell, brass bells and embroidered aprons - sparkling, gay and tempting in the sun. The Chieftain's house of Longkhai may well be proud of the inherited treasures of generations, which see the light only once a year at the great Spring Festival. Liang, eldest daughter of the royal wife, has first choice amongst all these decorative things; when she has picked out the best for

her own adornment, the daughters of the other wives must content themselves with what is left. But it is still too early to dress up in all her splendour; the long and weary business of hairdressing must first be gone through, and for this Liang depends on the co-operation of her friends, for no girl can dress her hair alone.

Soon the platform of the Chief's house is filled with a merrily chattering crowd of women and girls. The girls crouch in a row one behind the other, each busily engaged in dressing the locks of the girl in front. The hair must first be thoroughly cleansed and combed and brushed down over the back and shoulders. Then it is rolled tightly into a cylinder and bound round with a long ribbon of bark. If any girl's hair is on the short side, the end is hidden in a tube of bamboo round which the bark ribbon is continued so that no one



Before the day's pleasure begins the girls fetch water from the spring in long bamboo vessels



On a high bamboo platform erected behind the Chief's palace, his daughters, the children of many wives some of whom are royal and some commoners, prepare themselves for the festival. The family treasure of ceremonial dress and ornaments has been brought out and each girl has chosen her adornment from it



can detect where the hair ends. Liang, however, has no need of such artificial supplement; her light brown hair flows thick down to her waist over a gloriously modelled back.

At last a parting on the head, on each side of which the hair is smoothed down with water, concludes the hairdressing and now the dressing-up may begin. Liang throws aside the coarse cloth which encircles her hips skirtwise in working hours, and replaces it with a gaily embroidered apron scarcely the width of her hand, more of an ornament than a garment. Round her waist she belts a girdle of many rows of golden-yellow beads. Innumerable necklaces, some of gaily coloured beads, some of shells and discs of bronze make any other bodice superfluous. The wealth of ornament almost conceals her breasts, and her delicate long arms are covered from wrist to shoulder with rings and bracelets. Far the most valuable of these are some ancient bronze armlets, cast long ago in moulds long since forgotten—heirlooms whose provenance is shrouded in mystery. A headband binding her forehead like a diadem, and earrings hanging to the shoulder, give the final touch to her festal dress. The earrings are so heavy that their weight has to be borne by a cord across the head.

No part of her is now unadorned except her narrow hands with their long slim fingers, whose only ornaments are the fine blue lines tattooed on them at so much cost in pain. Does Liang suspect that despite the traces of hard field-work these hands of hers are beautiful? You have only to see her regal carriage, her confident smile and the slightly mocking twinkle in her brown eyes to know that she is fully conscious of her charms. And why not? At the young folks' evening gatherings do not all the lads crowd round her? Not one of them but has striven hard to win her favour. But only one seems worthy, only one has touched her heart. Ato is first in all work of the fields, none can rival him

in casting the hunting spear after the flying game. It is all too true that he hasn't yet got his head; but since these crazy white folk came to the country wars have been woefully rare and a girl must look for other proofs of prowess; in none of these does Ato fail. It was only a short while ago that he speared the famous leopard who had preyed upon their pigs and robbed the village of the pork for many a feast.

It is sad that Liang cannot hope to marry Ato, but he is of humble stock, while in her veins flows the purest blood of the sacred royal line. Sooner or later she will have to marry a chief's son from some neighbouring village and bid farewell to all the friends of her youth. If only one of the sons of the mighty chief of Chi, her mother's home, would ask for her hand. There at least she would not feel a complete stranger. No doubt the young heir of Chi will already have taken many a lesser wife into his household from among the girls of his own village; and to this she, who could hardly imagine sharing Ato with another girl, would certainly have to accustom herself? But who knows? She may not even love her husband; perhaps she will not care how many other women he has at his disposal; anyhow they will be her servants, one and all, and take the rough work off her hands. For once she is the Chief's royal wife, she will no longer work in the fields or carry water from the spring; the lighter tasks of spinning and weaving will fill her busy day. She hopes she will bear a son, for only *her* son, the child of a wife of purest royal blood, could succeed his father on the throne of Chi. The children of the lesser wives will remain commoners all their lives.

Foolish thoughts, begotten of gazing on the royal treasure! It is too soon to worry. Many years must pass before she need think of marriage and meantime she is happy in her love, for Ato has eyes for none but her. And today is the Festival of Spring and the whole village will admire her in her festive royal dress.



Liang, eldest daughter of the chief's royal wife, adorned with necklaces of coloured beads and shells. She has blackened her teeth, for it is considered shameful to have white ones like a dog's



Squatting behind each other in a row, her sisters perform the next stage in their toilet: rolling the hair and binding it with a ribbon of bark into a long cylinder



Daughters of ordinary villagers wear fewer ornaments and dress themselves in front of their houses

While the girls adorn themselves and dress their hair, some of the youths have rounded up nine of the black and hairy swine that rove between the houses and keep the village free from refuse. Before a pig is killed, one of the elder men flings some rice-beer on its snout, begging its forgiveness for the slaughter: "Grieve not, O pig, that thou must die! We send thee on the good path to the kingdom of the dead." Wherewith he plunges a bamboo dagger to the heart. The carcase is then singed over a quickly kindled fire and when the meat is cut up it is handed over to the women who cook it with various vegetables in earthen pots. Days before, they have brewed the rice-beer and now they pour it out into jars and vessels for the feast.

The sun is high in heaven before the girls begin their dance on the bamboo platform erected the previous day in front of the Chief's house. Liang leads the dance and for hours the maidens pace hand in hand, tripping round and round with measured tread and bending the knee in time to a monotonous chorus of song. There is little variation in the steps of their dance and little in the eternally repeated songs. But the old women, who crouch round the platform and proudly watch their daughters, find nothing boring in the performance, and the girls themselves show no sign of weariness.

You might well imagine that the male youth of the village would be there forming an enthusiastic circle of spectators round the dancing-stage: you would be wrong. The young men are far too much occupied with their own toilette. They are sitting in front of the bachelors' houses painting chalk patterns on each other's brown skins, arranging white feathers of the giant hornbill in the bushy crests of red goat-hair that adorn their hats, and brushing out their own long hair.

What the boy spends longest over and is most critical about, is the arrangement of his ear decorations; only the very choicest

of the golden or purple orchid blossoms are good enough for him, and the lad lucky enough to possess horns of gazelle or tusks of boar will drive a pair of these through the distended lobes of his ears. But the full dress of a warrior befits only those who have taken part in successful wars. There are still many of these veterans left, for the land has only recently been pacified and a few miles to the east of Longkhai lies the frontier of unadministered territory where war and headhunting are still, as in past times, the order of the day. The warrior who has secured a head, wears a tiny carved head of wood upon his chest and his headgear is adorned with a pair of horns carved out of buffalo ivory from the ends of which dangle tresses of human hair. Only a head-hunter is entitled to bear the numerous red-dyed rings of climbing palm that are worn on the forearm, only he may have face and neck completely covered with tattooing.

The Longkhai men leave their hair long and many of them have it down to their knees. They wear it wound in a knot at the back of their head and secured with a long wooden pin, on which small carved heads indicate the number of each man's trophies.

The toilette of the young braves takes many hours to complete, but the labour is worth while: a Naga warrior in ceremonial dress is a really imposing sight, and the women's hearts beat faster when the men, flourishing spears and daos as if setting out on the warpath, rush through the village with wild cries. With their tossing feathers and the gaily dyed hair waving from clothes and weapons they look like fantastic birds, and like birds in the mating season the males, rejoicing in the glory of their multicoloured spring accoutrement, reduce the females to comparative insignificance.

Singing and dancing, the men quit the bachelor quarters and pass along from house to house. Wherever they halt they



Adult men have long hair which they roll into a knot and fasten with a wooden pin



Naga boys enter thoroughly into the spirit of the festival and begin to sing and dance early in the day. But before the dancing begins they dress and arm like warriors—

—imitating their elders, they fix feathers of the giant hornbill in bushy crests of red goat-hair on their hats, and paint patterns on each other's faces with chalk



Hand in hand, the girls, too, dance tirelessly for hours on end on a bamboo platform in front of the Chief's palace. Individual taste accounts for differences in their dress—



—but common to all are the fresh leaves fashioned into hats, the belts of many rows of golden-yellow beads and the stiff pig-tails hanging down the shiny brown backs

are hospitably entertained; banana leaves are hastily spread on the ground and generously piled with rice and vegetables, while the girls hand round portions of cooked pork and fill the leaf-bowls of the guests with beer.

Finally all the various groups assemble for the dance before the Chief's house. The open space is thronged with surging crowds, axes flash high in the air, voices are uplifted and songs swell forth to break in a climax of harsh, uncanny yells. Suddenly silence falls. The girls, who up till then have been dancing by themselves on their platform, break off and mingle with the crowd of women onlookers. All the men and boys form a large circle. An old man steps into the centre; birth and office alike entitle him to act as intermediary between men and gods. He takes a handful of cooked rice and flings it towards the sky. His voice sounds solemn in the breathless stillness: "Oh God of Heaven, grant that our fields be fruitful; may we have rice in plenty; millet in plenty; taro in plenty. Let the people of our village be strong; let our children be strong."

After each clause the host of men raise their weapons to heaven and shout: "So let it be!"

The hearts of all the assembly tremble with awe in presence of the Godhead in whose hand lie weal and woe, good and bad harvests. Courageous and headstrong though they be, they know full well that not their work alone ensures the growth and ripening of the fruits of the earth. Therefore they sacrifice to Ghawang, god of Heaven, who grants fertility to the fields and to the children of men. In him alone they trust, and trouble little about the lower earthly spirits who are often hostile to man, and whom it is wise to placate from time to time with the blood of a cock, but who have no power over sun and rain.

Dark clouds have gathered over the mountains; as if Heaven deigned to answer, a flash of lightning is seen, and

thunder crashes in the distance. Heavy drops begin to fall and the crowd has barely time to seek the shelter of the Chief's projecting roof ere rain pours from the heavens in torrents. A spring thunderstorm passes in its might over the hills, and the thirsty earth greedily drinks the welcome rain.

No sooner has the rain passed over, than the old men group themselves round a bamboo pole which they have erected as an offering to the god of Heaven. They murmur low secret formulae while the young men dance round them with loud song that no woman may hear the words of the elders. It was months before I could induce a man to confide to me the meaning of this rite. Its theme is also the fertility of the fields: 'As the woman embraces her husband, so may the earth receive the seed of the rice into her womb'. The fertility of field and man are closely linked in Naga philosophy: both are the expression of the same life-spirit, on the plenitude of which the welfare of the village depends.

The ritual part of the festival is now over, and the people crowd round the fires over which great vessels of red rice are steaming. The Chief himself, with his brothers and the elders of the village, sits in the outer hall of his palace. The March night is chilly, and like the others the Chief squats on the ground near the fire, leaving his spacious throne, carved from one piece of wood, to stand empty. None but the Chief himself and his sons of royal blood may sit upon this throne, which is flanked on each side by a carved head of the giant hornbill. So sacred is the person of the Chief that no commoner may approach him upright. Even when he is sitting by the fire, the other men pass by with bended back.

A brother of the Chief now lifts the pot off the fire, and with a long bamboo ladle heaps the rice onto flat wooden dishes, one of which is set between each pair of banqueters. From other vessels



Groups of young Naga braves, carrying spears and axes, are arrayed as for the war-path and pass from house to house until they reach the Chief's palace



At many of the houses they are hospitably entertained by the occupants. Banana leaves are spread on the ground and generously piled with rice and vegetables. Pork and rice-beer are handed round



Eventually all the groups assemble to dance. 'The open space before the Chief's palace is thronged with surging crowds, axes flash high in the air, voices are uplifted and songs swell forth . . .'



he distributes thick taro porridge and cooked pork. Then conversation ceases. Squatting on their heels, the men shove huge balls of rice dipped in taro into their mouths. Only the Chief has a dish all to himself; for to share it with another, even a half-brother, whose mother was not of royal blood, would stain the purity of his rank. As soon as the meal is ended, the men pour water over their hands and begin the complicated process of preparing betel leaves and spicy barks for chewing.

The Chief's house is at least a hundred feet long, and in another hall the girls entertain their young men-friends, so hot from dancing that for the moment they can think of nothing but pouring down their throats one dishful after another of the clear, slightly foaming rice-beer.

The rigid etiquette which governs the conduct of the young, unmarried people is not relaxed. Jestings words fly to and fro whose meaning cannot be called even ambiguous, but the girls are seated to one side and even Liang can show her Ato no other mark of favour than to thrust little packages of betel into his hand more often than into another's. To see their prim behaviour and strict decorum, no one could imagine that so many of the girls and boys are long since lovers in the fullest sense. A Konyak girl has complete liberty to follow the dictates of her heart. From the ornaments she wears, a boy may know whether overtures of love may acceptably be made. When the parents allow a girl to exchange the leaden earrings of childhood for earrings of brass, this indicates that from henceforth they have no objection to her lending a willing ear to a lad's advances. The change to brass earrings is usually made on the occasion of the Festival and today many young girls are wearing the significant brass ornaments for the first time.

No wonder that the boys have been eager to outbid each other in the grandeur of their clothing and their prowess in the dance. Soon after the feast they storm

forth once more to the open space in front of the Chief's house and resume the dance. A simple measure is endlessly repeated, and at each beat of the music every dancer bends his knee while he flourishes aloft his dao, gaily decorated with goat-hair. A rough song accompanies and encourages the dance and conjures up visions of battle and of victory. The voices resound and carry far into the night; the rhythm to which they give birth gains independent life and becomes a power which governs all alike and blends individuals into one dancing whole. This rhythm is more than art, it is the voice of man's primitive instincts, a manifestation of the all-embracing rhythm of growth and decay, of love, battle and death. Is it only the song of man we hear? Does not Earth herself, trembling under the tread of feet and waking this day to new life, make her voice heard as well? Are not the white cloud-mountains, driven by a mighty wind across the face of the moon—is not the play of light and darkness in the heavens a part of this rhythm?

The pallid skulls which look down upon the dance from the front of a bachelors' house are also symbols of this harmonious alternation of death and life, life and death; brought home in triumph from numberless raids, they in their death are magically linked with the happiness and prosperity of the village. Their soul-power reinforces its own and contributes to the fertility of field and man.

The ranks of dancers break at last; brandishing their daos with shrill warcries, the warriors race madly round the open square. Then, with one long-drawn shout, they end the dance.

A moment later there resounds from the bachelors' house the booming of the giant drum, hollowed out of one tree-trunk. Down both sides the young men stand in two close-packed rows and bring their sticks thundering down on the wood in a complicated rhythm. In addition to the leader there are two individual players



The supreme moment of the festival arrives when an old man steps forward and invokes Ghawang, god of Heaven, to grant fertility to the fields and health to the children of men

besides the general body who strike in unison; this four-time harmony, and more especially the syncopated beating of the leader, produce a peculiar and anything but 'primitive' rhythmic effect.

Three mighty blows, which make the whole house tremble, bring the drumming to an end and the young folk assemble once more in the long gallery of the Chief's house for a dance. Boys and girls dance separately; it is almost completely dark but the light of the flickering fire catches now a burnished naked back, now the glistening blade of a dao.

Gradually the dancing throng thins out; the youngest boys and girls dance on, but the older ones slip away and celebrate the birth of spring in their own manner. In the privacy of a distant rice-store on the edge of the village Liang and Ato forget the world of dance and feast and the gulf that birth has fixed between chief and commoner.

The full moon rides the cloudless sky,

light and shadow alternate in a fantastic mosaic amidst which the silvery, palm-thatched roofs gleam like glittering stones. From time to time a belated group of lads passes singing and dancing through the village, where no one expects much sleep tonight. Save for such outbursts, silence reigns; only from the Chief's house are some indefatigable singers still sending forth waves of sound.

The festival is not yet quite over. When the new morning breaks, the girls come forth once more in all their festive dress and dance again round the open square. Their song continues till the sun emerges in red glory from the clouds. Slowly Liang divests herself of the heavy ornaments one by one, and bids a reluctant farewell to the time of leisure and gaiety. Today is a day of rest, but tomorrow work begins again: the new year starts the round of sowing, weeding and harvest and for months to come every day will see the people busy in their fields tending the rice.



Photographs by Christoph von Fürer-Haimendorf

The chief of Longkhai, a Konyak Naga village on the edge of British-administered territory



Beyond the range of British administration: warriors of Chingmei, a village of the Chang Nagas



Nagas of Panso bend their knees in the dance ; at their backs hang their *daos* or hewing-knives



A head-hunter's insignia : tattooed face, palm-rings on forearm, small carved wooden head on chest



A Konyak Naga in the ecstasy of the dance. Red goat-hair and a hornbill-feather decorate his hat



An old Konyak, famous for being a 'were-tiger' and roaming about in that guise at night



Of a tribe settled farther west in long-pacified British territory: an old Angami Naga



A Naga chief whose authority is supported both by sacred lineage and by head-hunting prowess

The Story of Tea. II

by OSBERT LANCASTER

To his entertaining story, published in our June issue, of Tea's romantic record as a social beverage and as a stimulator of smugglers, pottery, literary genius and maritime rivalry, Mr Lancaster now adds that of its production and distribution. His dramatis personae include many characters—the planter, broker, taster, blender, the wholesaler and retailer, as well as the State—the last appearing in conclusion as the villain of the piece: a character which, in 1938, it has not belied

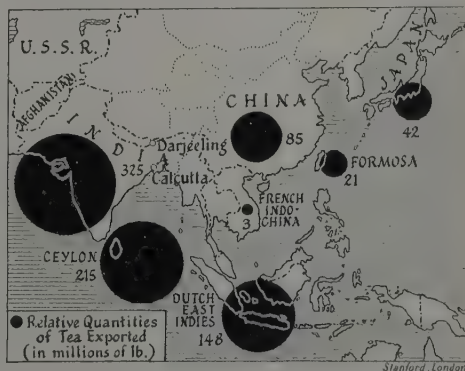
THE popular and stimulating beverage tea is derived, by a long, complicated and fascinating process of which it is the purpose of this article to give some account, from the plant *Thea Sinensis*, a flowering evergreen closely related to the camellia. This plant was first discovered and cultivated in China, to which country it was considered to be peculiar until early in the 19th century, when an indigenous tea-plant was found growing in Assam.

This discovery was of enormous importance, for not only did it confirm the views of those who had long held that the cultivation of tea was possible in India; it also removed the difficulties attendant on any attempt to acclimatize the China plant. Within a very few years tea-planting was firmly established on a commercial basis, first in India then in Ceylon, and in the course of the 19th century flourished so exceedingly that today those countries are respectively the first and second exporting countries of the world. How remarkable a triumph of industry, science and business acumen this rapid development represents can be fully appreciated only if one knows something of the difficulties which have to be overcome and the unremitting care and industry that must be exercised between the time that the site for a tea-garden is first surveyed and the time that the early morning tea appears at one's bedside.

Tea, like rubber and other tropical products, is peculiarly dependant on the climate. In its natural state the plant grows to a height of some twenty feet and will flourish in most warm, moist districts; but its intensive cultivation has been found most practical in India, Ceylon,

China, Japan, the Dutch East Indies and certain parts of Africa. Of these South India and Ceylon are perhaps the most favourably placed; the constant nature of the climate allows the plant to continue growing all the year round, whereas in North India and the other producing countries there is a close season of varying duration, owing to the incidence of cold weather, during which no further growth takes place. However, in certain districts, notably in the neighbourhood of Darjeeling, this period of inactivity is compensated for by the fact that the teas are usually of an exceptional quality.

Having chosen his site, the planter's first care is to prepare a nursery where the selected plants from which his garden will be stocked can be reared and carefully tended while the future plantation itself is being cleared. The task of clearing and preparing a plantation is often one of Herculean proportions. For Nature, with her usual lack of consideration, has so arranged it that those places where the tea-plant will grow best are equally congenial to every



form of tropical growth, and so the prospective planter frequently finds himself faced with the unenviable prospect of cutting down several hundred acres of trackless jungle. In some localities, however, where the vegetation is mainly light bamboo or high grass, his task is comparatively easy. When the last tree-stump has been dug out, the young plants which have been reared in the nursery are transplanted in densities that vary from two to four thousand per acre, according to the method adopted.

THE HUMAN ELEMENT

The initial agricultural difficulties having been overcome, the planter is called upon to solve the hardly less tricky problems presented by the human element. In most of the tea districts in India and Ceylon the local population is both unwilling and unfitted to supply the requisite amount of labour, and workers have to be imported from certain districts in India where surplus agricultural labour is available. These labourers, belonging to perhaps a hundred different castes and speaking as many dialects, not only travel from their far-distant homes at the planter's expense but bring with them their wives and families (also at the planter's expense) and have to be provided with clothes, cooking utensils and food for the journey. On arrival suitable accommodation has to be ready for them, together with a hospital and facilities for the practice of a variety of complicated religious beliefs. In addition the planter will have to build a bungalow for himself and his European assistants, a factory with the necessary drying-rooms, rolling machinery, etc., and several roads linking up the various parts of the plantation with the factory and each other. All this done, he can turn his attention to the serious business of growing tea.

THE GROWING PLANT

During the first couple of years after transplanting the young bushes are left

severely alone; that is to say, the ground round them is kept free of weeds—in a tropical climate a whole-time job for a large number of labourers—and various other trees are planted in between them in order to provide shade, but the bushes themselves remain untouched. At the end of the second or third year the plants receive their first pruning. This is a complicated process that differs according to the district in which the plantation is situated, the frequency with which it is performed and the theories on the subject held by the planter himself; for although the research stations are constantly experimenting opinion still differs as to the efficacy of the various methods employed. However, the main objects of all pruning remains the same: to keep the plant at a reasonable height for plucking and to stimulate growth. This is usually done by cleaning out the centre of the plant and encouraging the growth of the lateral branches in order to insure what is known as 'a good frame'. But while this is the general rule there are endless variations. In some districts pruning takes place every year, in others only once in two years or longer. Each country has its own usage, fortified by long experience and sanctified by tradition. When the planter has carried out his pruning, by whatever method the climate dictates or his own experience suggests, all is then ready, after an interval for recuperation has been allowed, for the delicate and all-important operation of plucking.

30,000 SHOOTS A DAY

This process, on which depends much of the quality of the tea, is one that calls for a high degree of delicacy, quickness and skill and is usually performed by women and older children. For the best tea only the bud and first two leaves are taken from each stem, but for coarser varieties a third leaf is also occasionally included. A plucker uses both hands and throws the leaves into a large basket, in the course of a day plucking a quite



Large-scale cultivation of tea is possible where certain climatic conditions prevail—for instance 8000 ft. above sea-level as at Darjeeling (above), or in low-lying areas of Ceylon. The creation of a plantation (below) calls for an enormous expenditure of capital, and of both human and animal labour





The lay-out of the plantation depends on the density at which shrubs may safely be planted and the necessity for rendering them accessible to the plucker. For the delicate operation of plucking women and children are employed. In Ceylon a good plucker picks 9 bushel-loads a day



fantastic number of shoots. In Ceylon the average number for a good plucker is 30,000. As approximately 3,200 shoots go to the pound of manufactured tea, each plucker is responsible for between 8 and 9 pounds of tea a day. Once the baskets are full the sooner they are removed to the factory the better, for if they are allowed to remain standing too long the centre of the basket develops heat which produces what is known as 'red leaf', a condition which has a deleterious effect on the quality of the tea. To prevent this the leaves are packed very loosely and the baskets removed as quickly and as frequently as possible, either by ox-cart, motor-lorry, light railway or wire shoot to the factory.

PREPARING THE LEAF

Between the time the leaf is delivered at the factory and the time it emerges *en route* for the docks it undergoes, in the case of black tea which forms almost the entire output of India and Ceylon, four principal processes: withering, rolling, fermenting and firing. Green tea, which is produced almost exclusively in China and Japan and constitutes but a minute fraction of the total amount of tea exported, is steamed, rolled, fired but not fermented. Oolong tea, produced principally in Formosa, is partially fermented. The first process, that of withering, differs in method according to the humidity of the local climate. In Northern India the leaf is spread on trays to a thickness of 1 lb. to each square foot and allowed to wither in the open for a period of from 18 to 24 hours; in Southern India, Ceylon and Java, where the climate is damp most of the year, the trays are stacked in specially constructed lofts through which hot air from the drying-machines below is passed. In the first case 100 lb. of tea are thus reduced to about 65 lb.; in the second, the same amount contracts to roughly 55 lb. During the withering process, which must be slow and even, the

leaf becomes like a 'kid-glove' in consistency and emits a fruity and agreeable smell.

The next process, that of rolling, has as its object the breaking down of the cellular structure of the leaf and the consequent liberation of the juices ready for fermentation. In the old days this was done by hand, as it still is in China; but now a variety of complicated and ingenious machines perform the operation at approximately seventy times the rate of a human roller. The actual process of rolling which these machines perform differs slightly, both in the length of time taken and in the physical pressure applied, according to the temperature of the district. In Ceylon the leaf may be rolled as many as six times, but in India it usually receives no more than two rollings, a light and a hard. When the rolling is over the leaf is still more or less green and soft but has acquired the characteristic twist.

From the rollers the leaf now passes to the fermenting-room, where it is laid out evenly on slabs of concrete, glass or some other non-porous material. To secure a good fermentation great care has to be exercised to maintain a constant temperature and the requisite degree of humidity; the first should be somewhere between 70° and 80° F., the second just below saturation point. In order to achieve the latter condition most modern fermenting-rooms are equipped with a system of sprinklers and, in the more old-fashioned factories, a number of wet curtains. The process of fermentation, which is purely automatic, continues until the leaf has attained a rich copper-red colour. The time which is needed for this metamorphosis varies from 1½ to 4½ hours, according to a number of different factors such as the length of the former processes, withering and rolling, the type of leaf being treated, the climate and local conditions.

The final operation of firing is perhaps the trickiest of all. In China, Japan and Formosa it is carried out in shallow iron

pans over a small charcoal fire; but in India and Ceylon this simple method has long been superseded by a mechanical operation of considerable complexity. The leaf, on a series of trays on an endless band, passes through a vast dryer where it is exposed to hot air at varying degrees of temperature. The object of this drying process is to stop fermentation which, if unduly prolonged, produces a 'flat' tea; this is only to be accomplished at a temperature of about 150° F. If, however, the temperature is too high at the beginning the leaf becomes 'case-hardened'. If it remains in the dryer too long it may become 'stewed'. In order to avoid these two catastrophes the greatest care and ingenuity are called for, both from the designer of the drying-machine and the man who operates it. During all these processes, and more particularly the last, the leaf has been losing moisture. The original 77 per cent in the fresh leaf is reduced to 66 per cent by the withering; this is further reduced, first to 30 per cent and then to 3 per cent, in the firing.

When the tea has emerged from the dryer it is sifted and then graded. The sifting is carried out by women and consists of removing all the stalks and inferior leaves which have been included in the tea. When this has been done, it is passed through a series of sieves with meshes of varying dimensions which separate the leaves according to size and shape. The various grades thus obtained are known by such romantic names as Flowery Orange Pekoe, the finest tea containing the delicate 'tips'; Orange Pekoe; Pekoe; Pekoe Souchong; Souchong and finally the Fannings and the Dust which, as one might gather from their names, are the smallest grade of leaf. (These names refer solely to the class of tea, and not, as is sometimes thought, to the quality of any particular growth.)

When the tea has been finally graded it is usually passed once more through the dryer before it is packed. It is then

packed according to grade in light wooden chests. Incidentally, it is interesting to reflect that the solution to the problem of finding a suitable substance for the packing of tea gave an entirely new material to the world and one which is being increasingly employed as an architectural and furnishing medium—namely three-ply wood.

FROM FACTORY TO WAREHOUSE

On leaving the factory the immediate fate of the tea depends very largely on the ownership of the plantation. It may be despatched to an agent in Colombo or Calcutta for disposal by auction; it may possibly already have been sold (though forward selling is not a practice that meets with universal approval), in which case it will be straightway sent off to the purchaser; if it comes from a plantation that is owned by one of the large grocery combines, it will go direct to their London warehouse. But far the most usual process is for it to be shipped to London for disposal, since London remains the centre of the tea trade and through it 550,000,000 lb. of tea pass every year.

With its arrival at the London docks the long series of mechanical processes to which tea is subject are at an end; from now on it is treated with all the consideration and reverence its value deserves. After being unloaded it is immediately transferred to one of the bonded warehouses where it undergoes several inspections. The first of these is carried out by a Government Tea Inspector who is called upon to pass it as being free from any impurity or colouring matter; nowadays the wilful adulteration of tea is almost unheard of, but in the 18th and 19th centuries, when green tea was most popular, it was frequently treated with indigo and other dyes in order to give it a fine colour. After this inspection, the tea is weighed by the employees of the warehouse company and further inspected for damage by the agent of the owners.



The gathered leaves are conveyed as quickly as possible to the factory attached to the plantation, where they are spread thinly on special trays and allowed to dry: where the climate is favourable without artificial aid, elsewhere with the help of hot air from the drying-room





The conveyance of the finished tea (packed in wooden chests) from the factory to the port is carried out by methods of transport varying from primitive ox-carts to express lorries

This done, the selling broker is notified and comes to the warehouse, where he finds samples drawn from every chest ready for his inspection. These he examines carefully for any variation in the size and quality of the leaf, and if he finds any notable difference between one chest and another he orders the total consignment of any one grade, Pekoe, Souchong or whatever it may be, to be rebulked in order to ensure perfect uniformity of quality. When he has satisfied himself on this point the broker lists the tea in his catalogues, which are printed and distributed to the wholesalers a week before the intended day of sale. In anticipation of a visit from the prospective buyers, the warehousemen then set aside selected chests of each grade from which the buyers' samplers will draw off a sample by boring a hole. This sample they will take away to their office.

THE TEA-TASTER

It is at this point that the romantic and virtuoso figure of the tea-taster makes his first appearance on the scene. These men by long years of practice have developed their sense of taste and smell to a pitch of sensitiveness that finds a parallel only among those oriental musicians whose ears are so fine that they are accurately attuned to quarter, eighth and sixteenth tones.

On a long table in the buyer's or broker's 'sale room' the taster is confronted by a row of 200 or 300 little pots of peculiar construction, and an equal number of cups. In each pot is placed a small quantity of tea, to the weight of a sixpenny piece, and to it is added the necessary amount of water which has been brought exactly to the boil. When the taster's sand-glass tells him that the tea has stood for precisely five minutes, the pots are emptied into the cups and the lids, which are

specially devised to retain the tea-leaves, are reversed and placed on top of the pots. The taster thereupon takes a mouthful from each cup, starting with the inferior samples and working up to the Flowery Orange Pekoes, and carefully examines the leaves in the reversed lid while he rolls the tea round his palate. When he has thus tested the quality of the tea, he spits out his mouthful into an adjacent spittoon (a taster never swallows a mouthful of tea), and indicates to his clerk what he considers the proper price. The clerk notes it down in code, opposite the particular tea in the catalogue, and passes on to the next sample.

AT MINCING LANE

Armed with the information provided by his taster, the buying broker arrives in Mincing Lane, where all tea auctions have

been held since the termination of the East India Company's monopoly put an end to the auctions at East India House. At the height of the season sales take place on four days a week: Indian teas on Mondays and Wednesdays, Ceylons on Tuesdays, Javas and Sumatras on Thursdays. China tea is nowadays usually sold by private treaty, but if any does come up for sale it is offered on Thursdays.

The actual bidding calls for a large amount of knowledge and skill because the sale is conducted at a considerable speed, as many as 250 lots being knocked down in the hour; moreover the separate lots are not announced, the auctioneer just going straight through the list. The bids advance by farthings and the buyer has to know to a fraction exactly the price at which it will be profitable to buy. Tea prices fluctuate as frequently as those of



At the London Docks the tea is transhipped to barges and conveyed to the bonded warehouse

any other commodity, but the various grades nearly always retain the same ranking. On the average Ceylons fetch the highest prices, then the Indian teas, then Javas and Sumatras. An exception is provided by certain Darjeelings from North India, which are the aristocrats of the tea world and rank even above the best Ceylons.

THE BLENDER'S ART

As soon as the wholesaler has obtained possession of his purchase, there commences the delicate and important business of blending. Formerly all teas reached the retailers 'straight', that is unblended, and were either sold over the counter in the same condition or blended by the grocer to suit the taste of individual customers. Now, 80 per cent of all the tea sold is blended by the wholesalers and the number of old-fashioned grocers who produce their own particular blend, alas! decreases annually.

This development does not, however, as might be assumed, indicate any standardization of the tastes of the public, rather the reverse; the big wholesaler is in a position to acquire a far greater variety of teas from which to produce his blends than the independent grocer could ever afford, and no pains or expense are spared to discover and provide for every vagary of the national fancy.

The blender of the wholesale firm has a task of enormous importance and complexity. Not only must he possess the palate and experience of the ordinary tea-taster; in addition he must have a thorough knowledge of the innumerable types, growths and crops of tea and the ability to determine which of them are likely to give the best results in combination. It is not therefore surprising that this *maestro* should have acquired a vast fund of peculiar knowledge and developed a language as strange and as incomprehensible to the lay ear as the fantastic argot employed by the devotees of swing music or the obscure

terminology in which the pillars of the law frame their mysterious enactments.

A sample may be declared to be 'raw' or 'harsh', two terms which to the tea-taster are widely different; it may lack 'briskness' but have sufficient 'pungency', or it may fail to 'stand up'. All of which phrases, it should be understood, bear little or no relation to the meanings attached to them in ordinary conversation. Moreover, a wide knowledge of the variations in popular taste in various parts of the country is indispensable, for the demand for tea is probably more irrational in many of its manifestations than that for any other commodity. Thus, one would assume that the most expensive teas would find a market among the section of the public best endowed financially; in actual fact the largest and most constant consumers of the fine-grade Ceylons and Darjeelings are the poverty-stricken peasantry of Ireland. And why, for instance, should the inhabitants of the colliery districts and Northern England generally persistently drink far more expensive tea, even in times of industrial depression, than those in the South? Why does Yorkshire prefer Darjeelings and Travancores, while south-western England likes Ceylons? (The preference of the Scots for strong Assams, teas which 'get a good grip of the third water' may perhaps be explained by reference to well-known racial characteristics not unconnected with economy.)

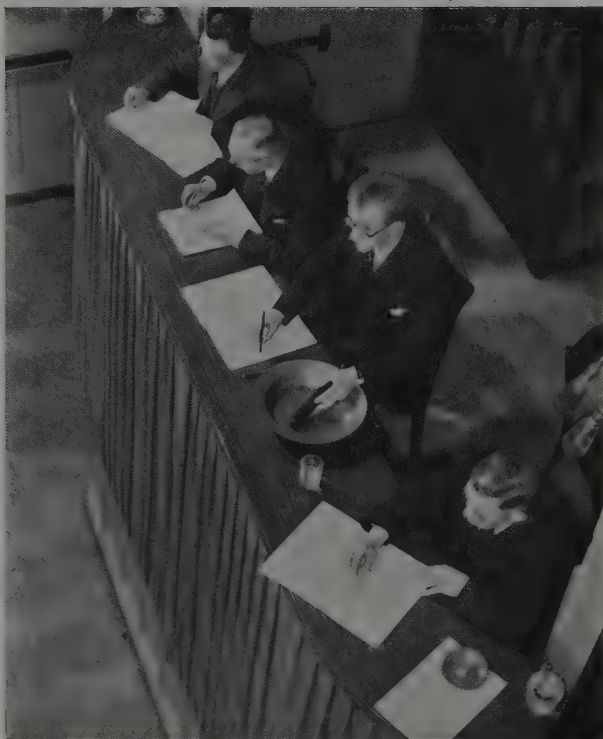
Whatever the reasons for these peculiarities may be, and whether or not the psychologists and mass-observationists will one day elucidate them, the tea-blender surrounded by his samples and pots and spittoons in the London 'sale room' can never afford to neglect them.

WATER IS IMPORTANT

In addition to the peculiar characteristics of the inhabitants, he is also called upon to take into consideration those of the water in all the various regions to



Tea-tasting is carried out by experts in the buyer's sale room. They taste as many as 300 samples at a time, recording their opinion as to the correct price for each



At the tea sale room the auction is conducted at a considerable speed, as many as 250 lots being knocked down in an hour. In London, at the height of the season, sales take place four times a week

which the firm's tea is despatched; for tea is a drink in which water plays a part hardly less important than the actual leaf. Thus if the water is hard, highly fired teas of the harsher sort give the best results; while a young flavoury leaf is the best suited for infusion with very soft water. In order that the blender may make no mistake about the exact proportions of his blend under varying conditions, it is the custom in all the big tea-houses to have a large stock of sample waters brought from all over the country. Accordingly, when he is blending a tea which is likely to have a large sale in, say, Plymouth, he will be careful to see that the water he uses in tasting is the soft water of South Devon.

THE LAST STAGE

The last stage on the journey from tea-

plantation to tea-cup is controlled by the retailers. When tea first became popular in this country it could only be purchased from the coffee-house proprietors, but it was not long before it became the stock-in-trade of most grocers, though for some time those who sold it were known specifically as 'tea grocers'. Today, despite the appearance of many other types of retailer, the independent grocers handling tea still number some 80,000 and remain the most numerous class of retailers. Next come the Co-operative societies with some 5000 shops in England, 75 per cent of which do their largest business in groceries, handling over 100 million lb. of tea annually.

There are also the various chain-store organizations—grocers and tea-shops and restaurants—which sell tea across the counter. In addition, there are



In recent years the custom of selling tea already packed by the wholesaler has become almost universal and the number of independent retail grocers who make up their own blend decreases annually

numbers of shops, some independent and some part of multiple organizations, which specialize in the sale of tea, coffee and cocoa. In America (but not yet in England) there are the numerous drug-stores which, to those whose sole acquaintance with American life comes from novels and films, seem to sell everything except drugs, and which frequently carry considerable amounts of tea in stock. Finally there are the mail-order houses and home-service merchants.

TEA TAXES SINCE 1660

So far three principal figures have appeared in the saga of the tea-leaf; the planter, the wholesaler and the retailer; but there exists yet a fourth who, although less personal, is hardly less important—the State. The first tax on tea was levied as early as 1660, when an excise duty of 8d. a gallon was levied on the brewed product as sold in the coffee-houses. This method of taxation was found exceedingly expensive and difficult to operate and in 1689 was changed to a 5s.-a-lb. tax on the dried leaf. This was raised to 6s. in 1695.

Early in the 18th century Sir Horace Walpole abolished all import duties on tea and substituted an excise tax; as a result trade increased, and in 1723 importations for the first time exceeded a million pounds. So flourishing a trade, however, presented too great a temptation to successive Chancellors, so that throughout the century taxation continued to mount, which resulted in a parallel increase in smuggling until a point was reached when more than half the tea consumed in England had paid no duty at all. At last, after repeated representations from the tea merchants, Parliament was forced to take action, and in 1784 was passed the Commutation Act which reduced the *ad valorem* duty on tea from 120 per cent to 12½ per cent, with the result that smuggling immediately declined and the legal imports doubled.

But the necessity of paying for the Napoleonic wars soon sent the duty rocketing up once more and in 1819 it had reached 100 per cent, where it remained until 1833, when it was abolished and a flat rate of 2s. 2d. a lb. substituted. Fortunately for the consumer the price did not increase at the same rate, for during these years a notable increase occurred in the consumption of tea, partially due to the Temperance movement, which enabled the merchants to keep down prices. In 1840 the nation consumed 32,314,000 lb. of tea and the duty was 2s. 1d. a lb. plus an *ad valorem* duty of 5 per cent.

The tax remained the same until 1851 when it was reduced to 1s. 10d. and the *ad valorem* duty abolished, by which date consumption had increased to nearly fifty-four million lb. For the rest of the century the duty continued to drop and the consumption to mount, but in the first year of the new century the former was raised from 4d. to 6d., the annual consumption then standing at the enormous figure of over 250 million lb.

The expenses of the Boer War maintained the necessity of a sixpenny tax, increased to 8d. in 1904, until 1906 when it was reduced a penny. The Great War sent it up once more, and during these years there occurred the first serious drop in consumption—twenty million lb. in 1917, due not to any falling off in the demand but to the difficulty of maintaining the supply at the time of the submarine blockade. This set-back, however, proved purely temporary and the long-range effect of the war, probably owing to the enthusiasm which the men in the trenches developed for tea whenever they could get it, was notably to increase consumption. Whereupon the tax steadily decreased until in 1929 the Englishman could drink his cup of tea without making any contribution to the exchequer for the first time since the reign of Charles II.



*The Arab in his thirsty
desert—*



*—the Eskimo, in the
frozen north—*



*—the Uzbek, at the
gates of Samarkand: the
taste for tea has reached
them all*

*Indoors, tea is the family
drink—*



*—out of doors it inspires
camp-fire songs—*



*—and on the ice at
fashionable American
winter resorts it is the
latest craze*

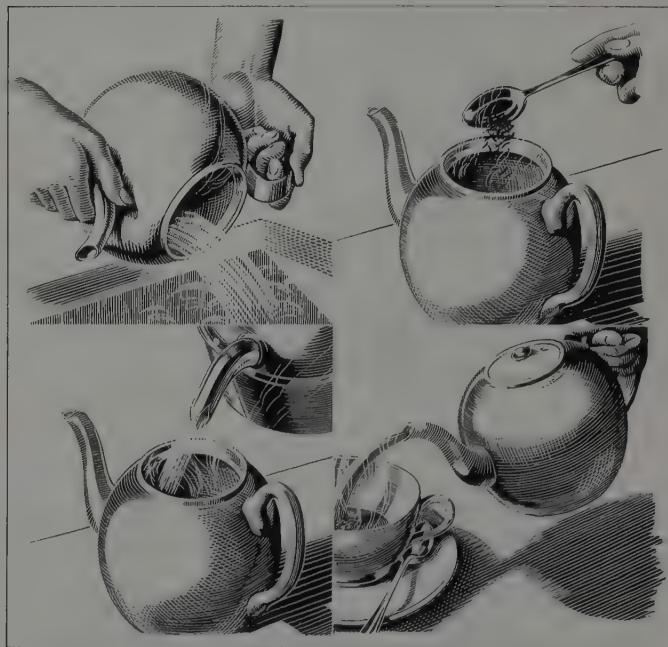


Alas, these halcyon days did not long continue. The world-slump affected the tea industry (which already, as early as 1920, had had a taste of the dangers arising from over-production) as harshly as any. Not only was the duty reimposed in 1932 (rising to 8d. in 1938), but in the years 1932, 1933, 1934 world-consumption failed to keep pace with production. As a result, in 1933 an agreement was reached between the Indian, Ceylon and Dutch producers to limit their production and pool their advertising resources and with the co-operation of their respective governments to set up

an International Tea Marketing Expansion Board.

THE NATIONAL BEVERAGE

In 1937 the consumption of tea in the United Kingdom was 435,000,000 lb., an average of $9\frac{1}{4}$ lb. per head of the population; figures which indicate that the average man, although unlikely in the near future to emulate the notable feats of daily consumption that earned Dr Johnson so exalted a position in the esteem of every tea-merchant, has lost none of his taste for tea, which has now become the staple beverage of the nation.



Rila Monastery

Notes and Photographs by J. Allan Cash



Rila Monastery is situated in the wild and mountainous country of south-western Bulgaria. Since its foundation in A.D. 1335 the character of its surroundings and the rude conditions of life in its neighbourhood have changed hardly at all, as may be seen from a recent view of Rila village, which is only a few miles away. A similar state of changelessness is not to be found in the monastery itself, which is the largest, richest and most famous in Bulgaria, for the most arresting fact about it is the success with which the monks have reconciled the practice of their simple faith with the application of progressive modern methods to the management of their enormous estate



Stanford, London.



The monastery is built round a court, along the sides of which run tiers of galleries. From without (below) it has the appearance of a fortress and indeed through five centuries of Turkish domination it was the guardian of the national soul and kept alive the hope of independence





Inside the courtyard stands the church, rebuilt in 1834, with the original 14th-century tower



The cloisters are adorned with elaborate frescoes representing scenes and episodes from the Bible



The interior of the Church, whose walls are covered with paintings illustrating the lives of the saints and apostles. The building conforms to the same tradition as the churches of Mount Athos



The homely office where the Igumen or chief monk transacts the business of the monastery

The present Igumen, the Archimandrite Kliment, who avails himself of modern scientific devices to run the estate on practical lines. He has some forty monks working under him



Twenty monks live in or near the monastery, while others are scattered about the various lands as agricultural overseers or bailiffs. A secretary-monk working in his bed-sitting-room



On August 25 thousands of pilgrims gather at the monastery to celebrate the birthday of the Virgin and about 1500 are accommodated within its walls. (Above) A guest-room. (Below) The general office where monks and laymen deal with the various branches of the monastery's activities





Monks lending a hand to unload fuel brought from the rich timber forests of the estate

Germany's Former Colonies

Mr Patrick Balfour having described, in our May and June issues, the 'B' class Mandated Territories, we turn to those of the 'C' class. Further description of South-West Africa, now administered under 'C' mandate by the Union Government, is rendered unnecessary by the comprehensive account given in The Geographical Magazine for September 1936; and just as that account was written by a South African of German descent, so the present article on Australia's Mandated Territory of New Guinea is contributed by a young Australian biologist who has participated in several scientific expeditions to the territory

III. North-East New Guinea and the Bismarck Archipelago

by A. J. MARSHALL

A LITTLE more than a month after the declaration of the Great War the Tropical Contingent of the Australian Imperial Forces took German New Guinea. Two separate detachments of troops were landed on the island of New Britain, with orders to advance on the German wireless station at Bita Paka. Brief opposition was encountered, but with a loss of three men the wireless station was taken. The following day, September 12, the contingent entered the capital, Rabaul, and British occupation was formally proclaimed. In addition, a proclamation in pidgin-English was drafted and read to the more civilized natives at the capital. It was a highly humorous document which concluded with 'No more 'im Kaiser—God Save 'im King!': but it sufficed to impress upon the Melanesians that a change in régime and policy had taken place, and the small Army of Occupation settled down to the exacting task of administering the country during the following years of war.

HERR HABER, the German Governor, surrendered a few days after the Australian occupation of Rabaul. Most of the German plantation-owners who had not fled over the Dutch border and into other non-British territories were permitted to continue working their properties, though no profits were allowed to leave the country

and the planters were under more or less constant surveillance. There was little friction between the pioneers and the invaders, and a surprisingly amicable relationship was maintained until 1920, when Australia accepted the territory as a 'C' class mandate.

An Expropriation Board was formed, and arrangements were made to take over all German property, payments being made from the proceeds to Germany's credit in the reparations fund. Strict preference was accorded to ex-soldiers, when the former German properties came up for tender, so that about nine out of every ten planters are men who served with British forces during the War. At the same time (despite the fact that most of the Germans were deported in 1921) some of the most flourishing concerns of today are controlled by the old pioneers. The premier missions, too, are still frankly German (though not Nazi!) in ideals and method. With few exceptions it would seem that the Germans of today are among the territory's most law-abiding and capable citizens.

NEW GUINEA and the Bismarck Archipelago lie hard by the equator, a little north of Australia. The lowland climate is damp and humid, with malaria inescapable, blackwater fever, dysentery and other tropical diseases of very common incidence.

Australia's
Mandate

A Big Task
for a
Few Men

ence. In a territory which comprises a couple of hundred islands and a largely unexplored mainland of some 70,000 square miles, the magnitude of the task which faced the handful of young officers and men who were originally appointed to administer it will be readily understood. In those days European influence extended only along the coastlines; even the immediate hinterland—a chaos of misty unexplored ranges—was peopled by savages who had never seen a white man. The adjoining territory to the south, Papua, was still largely uncontrolled, and the great area of Dutch New Guinea was known only to wandering plume-hunters from Malaya. Copra, a little sisal-hemp production and paradise plumes were the only important industries, and the last-named had recently been declared illegal.

AT this stage in the country's history, the healthier upland plateaux of the interior were scarcely dreamed of. The Germans had made one or two notable expeditions, but apparently never, on any of their trips, reached the heart of the island. The gold

The Search for Gold

reached the heart of the island.

prospectors of the Papuan side knew more about German New Guinea than did the Germans, and were forever making stealthy gold-seeking trips over the border and were just as often ordered off by the German district officials. But when Australia took over the mandate, there was an immediate and steady influx of exploring bushmen, searching for gold, quietly penetrating further and further every year. These men often had trouble in dealing with the tribes; serious brushes between brown men and white were frequent. The gold-seekers brought back accounts of great upland areas of waving grass-lands, of healthy, fever-free altitudes and vast unestimated inland populations. Then, in 1926, the prospectors found the payable gold for which they had been searching. In the short space of a few years, this discovery, made by a handful of hungry, ragged nomads, lifted the Mandated Territory from an obscure Pacific backwater to a wealthy gold-producing country.

BY virtue of its peculiar physiography New Guinea was quickly forced to become





E. M. Heim

Matupi Crater, near Rabaul. Since its eruption in 1937 the Australian Government has been considering the transfer of the seat of administration from Rabaul to the New Guinea coast

air-minded. Tests proved that the great alluvial deposits of the interior were wealthy beyond dreams. Yet roads into the treasure house were impossible. The ranges soared thousands of feet into blanketing mists, a cruel chaos of tangled peaks upon whose ridges dwelt tribes who bitterly resented the arrogant invasion of the white man. Native portage was the only possible way to get stores and implements into the gold-fields. The expense of feeding teams of struggling carriers was terrific, despite the fact that whenever possible food-depots were established with friendly tribes. Only the phenomenal richness of the Edie Creek and its satellites, Bulolo and the other newly discovered fields, made transport costs bearable.

The miners found that they could make reasonable profits with primitive sluice-boxes and native labour and were content; more ambitious men began to think of gaining dredges and the profits that they

could then scoop out of the rich river flats. But how to get parts of dredges, weighing up to half-a-ton, over the inhospitable ranges from the coast? At that time the aeroplane that could lift the machinery which the mining engineers required had not been built. Germany, because of treaty restrictions against fighting aircraft, had at that period outstripped the rest of the world in commercial carrier-plane development. So gold-fields' representatives visited Germany and purchased the best weight-lifters available. They placed orders for huge new machines, to be specially designed and built to carry the heavy dredge-parts over the mountains. Landing-grounds were lengthened to accommodate the great new planes from Europe; mining-plant was imported and triumphantly flown into the diggings: the gold industry was established.

Even today every article needed for the gold-fields is carried by plane. Cattle, pigs and talkie-equipment; race-horses,



H. Champion Hosking

H. Champion Hosking

All material for the New Guinea gold-fields is transported into the interior by air. (Above) Loading a lorry into a Junkers plane



Giant dredges are used at the diggings but primitive sluice-boxes worked by native labour still provide reasonable profits for gold miners

motor lorries, even a whole town, two hydro-electric stations, mills, hotels and stores have all been taken across and gradually built on the plateaux beyond the hot coastal ranges. So vast is the quantity of merchandise carried that this remote, little-known island possesses the largest and most efficient aerial cargo service in the world.

IN 1914 the European population numbered 1027, many of whom were missionaries labouring in the interests of the

Thirty
Years of
Prosperity

Lutheran and the various German Catholic mission organizations. The latest

pre-war trade-statistics available are those of 1907, when the imports were £166,585 and the exports £97,563. This latter figure mainly represented the export of copra and bird-of-paradise plumes. By 1920, however, the figures had jumped to £661,441 and £673,992 respectively, whilst seven years later £1,471,026 worth of goods were exported and more than £800,000 listed as imports. The gold-boom was responsible for the phenomenal jump from the preceding steady rise, and later, when every other Pacific territory was in the doldrums through the disastrous decline in copra prices, the Mandated Territory alone carried on in a wave of prosperity. The latest available figures (1935-36) show that the Territory's imports have risen to more than a million and a quarter pounds (Australian), whilst gold, copra, desiccated coconut, trochus-shell, trepang, coffee, kapok and other less important commodities to the value of £2,573,251 have been exported. Of this total 302,619 oz. of gold realized £1,704,498. Eager to improve the mining and agricultural resources of the Territory, the Administration has established experimental farms in certain districts; Government entomologists are employed, and valuable concessions have been granted to oil companies who are conducting exhaustive surveys of the interior.

GERMAN traders are given every encouragement in New Guinea. The Nord-Deutscher Lloyd Company runs a line from Hong Kong to bring in trade goods and other cheap merchandise and to

Trade with
Germany

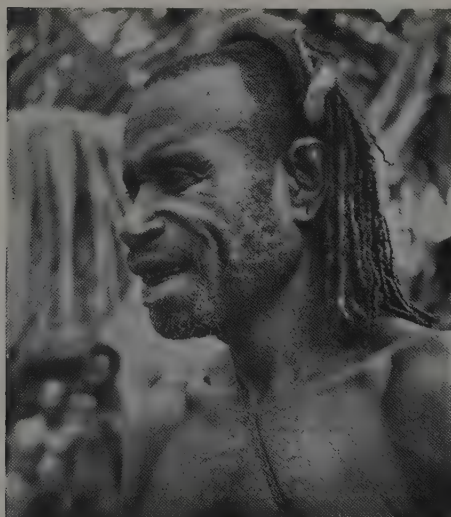
take away copra, trepang and trochus and green-snail shell for Japanese conversion to mother-of-pearl buttons. German trade was actually doubled between 1935 and 1937: it rose from £45,000 to nearly £100,000, placing Germany third (next to Australia and the U.K.) among the Mandated Territory's customers. As an importing power, Germany ranks fifth behind Australia, the U.S.A., the United Kingdom and Japan.

In 1936 the Territory imported German goods to the value of £54,441, or approximately $\frac{1}{100}$ of 1% of Germany's total export trade, and in the same year its exports to Germany amounted to £98,261, or roughly $\frac{1}{80}$ of 1% of Germany's total imports. In 1907, when the colony was



H. Champion Hosking

Copra, the dried kernel of the coconut, is one of the most important articles of export. Natives loading sacks of copra at Alexishaven near Madang



H. Champion Hosking

A native of the interior whose success as a head-hunter is shown by his coronet of kapul-skin

a German possession, its exports to and imports from the Fatherland represented about $\frac{1}{30}$ of 1% of the whole of Germany's overseas trade.

THE native population has often been casually estimated; some half a million natives have been actually included in the census. No doubt several times that number exist; many of them living deep in the interior under stone-age conditions, totally unaware of the white man's proximity or even existence. Recent travellers have returned from inland reconnaissance with fresh stories and astonishing photographs of vast areas consisting of fertile valleys, heavily populated with fighting agricultural people who know nothing of the European and his ways. Often the savages mistook the white men for gods and seemed to recognize in the native porters reincarnations of dead relatives lost in tribal forays. These hinterland peoples appear to differ completely from the tribes of the littoral and the sub-coastal regions.

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There is an extraordinary diversity of types among the peoples of the island. This is especially pronounced along the coastlines, where in many places one finds paler-skinned, comely people, a great contrast to the rather ugly Melanesians who surround them. It is thought that these paler folk were originally of Polynesian stock which attempted to establish colonies during their migrations along the northern coastline into the Pacific. In many islands they succeeded, so that we find island-communities of graceful, pale-faced people scattered about in the black sea of Melanesia. The dark-brown mainland people are said to belong to two distinct types, Papuans and Melanesians; whilst a third and pygmy type also occurs in several remote mountain areas of the interior.

The non-native population of the group is not considerable, despite the fact that the European population has trebled since the discovery of gold. The jealously guarded 'White Australia' policy keeps all troublesome aliens out, though a mild problem exists in the 1400 Chinese who are mainly congregated in communities in the most heavily populated districts of the Territory. These Chinese were originally imported as coolies by the Germans. However, they quickly realized the advantage of British rule and, being honest and industrious, rapidly left the labouring ranks and became prosperous store-keepers and tradesmen. Next to the 3288 Britons, some 440 Germans constitute the biggest section of the European population.

THE German and Australian methods of administration differ in many ways. The German method was largely one of direct rule; the Australian strictly indirect, with much authority and a fair amount of trust vested in the headmen of the various tribes. In New Guinea, where there seem to be few or no powerful chiefs, this system has many drawbacks, but it appears nevertheless to work with sur-

**Native
Responsi-
bilities**

**A Mixture
of Races**

prising effect. Each village in 'controlled' territory is invited to nominate a *luluai* (head-man), who wears a distinctive Government cap, and a *tul-tul* (interpreter) who does likewise. In hundreds of villages there is also appointed a medical *tul-tul* (doctor-boy) who has been given three months' training on the coast in the use of iodine, bandages and commonsense. These officials are responsible for any disturbance in their villages and are held directly responsible by the Assistant District Officer who is in charge of the sub-district which covers their territory.

Forced labour is not permitted in New Guinea today. If a native does not desire to work for the white man he is not expected to do so. Adult male natives who live in districts where work is available, however, are compelled to pay a head-tax of ten-shillings per adult male per annum as an incentive to work. Actually the tax is so small that any able-bodied native can easily make the required amount by selling a small quantity of *sak-sak* (sago) to the neighbouring planters, or by diving for a little trochus or green-snail shell once in a while. And the native has a double sense of relief in the knowledge that, even if he fails to pay the tax, an understanding district official will merely sentence him to a few days' road-cleaning or grass-cutting or some other trivial task in default of payment.

NO difficulty is experienced in securing brown labour for the various commercial enterprises, and this is a perennial compliment to the mandate administration. It is the ambition of almost every civilized native boy to 'mak'

'im paper' (contract) at the district office up on the hill, and thus get away to work on gold-fields or plantations under the happy and humane regulations framed by the Administration. In trivial disputes between natives a special native court is held under the jurisdiction of the nearest

European Administration official; murder and other serious cases are adjourned to the capital. In disputes between natives and white men the native is always assured of utter impartiality. The only white man ever executed in New Guinea was hanged for the murder of natives. The chief complaint against the Administration is that it forever 'thinks kanaka' instead of in the European's interests. This charge is, in actual fact, a compliment!

THE native of today may operate a banking account with much the same privileges as are extended to any European customer of the Commonwealth Savings Bank. An education policy has been formulated, and the work of providing selected young natives with a certain amount of European education is going

Protection
for the
Uncivilized



E. M. Heim

Loin cloth, distinctive cap, belt and bag compose the full dress uniform of an official native messenger in the territory

ahead. An efficient Public Health Department operates throughout the civilized districts, with numerous branches each under the control of a trained medical assistant or tropical health specialist. Medical patrols are sent irregularly through 'controlled' territory and much valuable medical work is done by the district officials on their regular patrols.

The uncivilized stone-age native is rigidly protected by legislation which forbids any man to enter 'Uncontrolled Areas' without a permit from the administrator. This permit is rarely if ever granted to non-Government persons, with the result that the exploitation of primitive peoples is a matter of extreme difficulty. The penalty for entering uncontrolled areas is £100.

UNDER the former German régime natives were forced to work whether they wished to or not; altogether, they possessed few or none of the rights and privileges which they enjoy under the present Australian administration. A story associated with Bulowinski, most famous of all German Pacific administrators, illustrates this point. New Ireland, situated in the Bismarck Archipelago, is a long jungle-clad island of great beauty, and here Bulowinski made his home. He was a

harsh despot, yet in many ways a great man and one who possessed an extraordinary influence over natives. He built a magnificent road of crushed coral, carried from the coralline coast, through about a hundred miles of thick tropical jungle, and made the people of the villages whose territory adjoined the road responsible for its maintenance. Periodically the administrator drove along his road in his carriage and if he found any section unrepaired, or even unswept of fallen leaves, he would force the natives to unharness the horses and carry the carriage—and himself—across the neglected section of the thoroughfare.

THE Mandated Territory today, despite its obvious drawbacks of climate and prevalence of disease, is a not unattractive place in which to live. Alone among the Pacific territories it escaped the trade depression of a few years ago, and each year it returns a substantial surplus. The officials, mostly young and enthusiastic, judiciously temper the climate and their tasks with beer and cricket, but behind the apparently happy-go-lucky spirit of their organization there is a quiet resolution and efficiency which I have seen nowhere else among the other and older colonies that I have visited.

**A Little
Tyrant and
his Road**

**Beer,
Cricket and
Efficiency**

PHOTOGRAPHIC NOTES

Edited by F. S. Smythe

17. CINÉ-PHOTOGRAPHY (4)

Now that the craze for 'miniature' photography is exhausting itself, more and more 'imaginative amateurs' are investigating the possibilities of ciné-photography as an intellectual pastime. One of the branches of ciné-photography which is of particular interest to the creative type of mind is the 'cutting' or 'editing' of material which has already been shot.

Cutting is not what its name implies. The term 'editing' is also incomplete. Cutting, as the word is used today in connection with film production, means 'composing'. The film is 'composed' by the cutter and ciné-director.

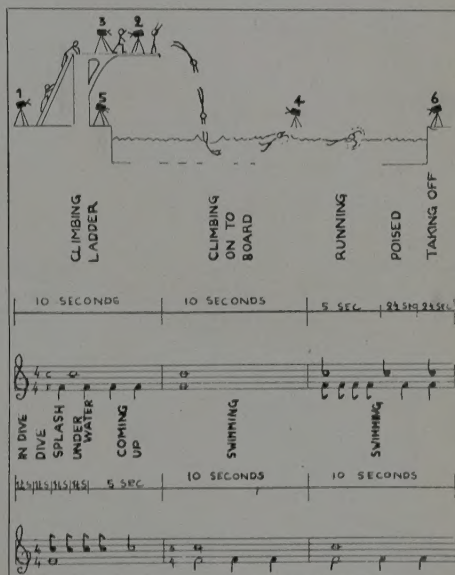
"The work of the director", writes Pudovkin, "is characterised by thinking in terms of filmic pictures . . . by considering real incidents as material from which to select characteristic elements and by building a new filmic reality out of them". But he adds . . . "Only by his editing methods can one judge a director's individuality".

Editing, or cutting, is, in fact, nine-tenths of film production. Only by careful cutting can those ciné-snapshots, taken on trips abroad or of family events at home, be made into film stories which will prove interesting to everyone, apart from their sentimental values. If this problem of cutting is approached from the right angle, the amateur ciné-photographer will find that a vast new realm of intellectual entertainment will be opened up for him.

The following is given as a very elementary example of film 'composition'.

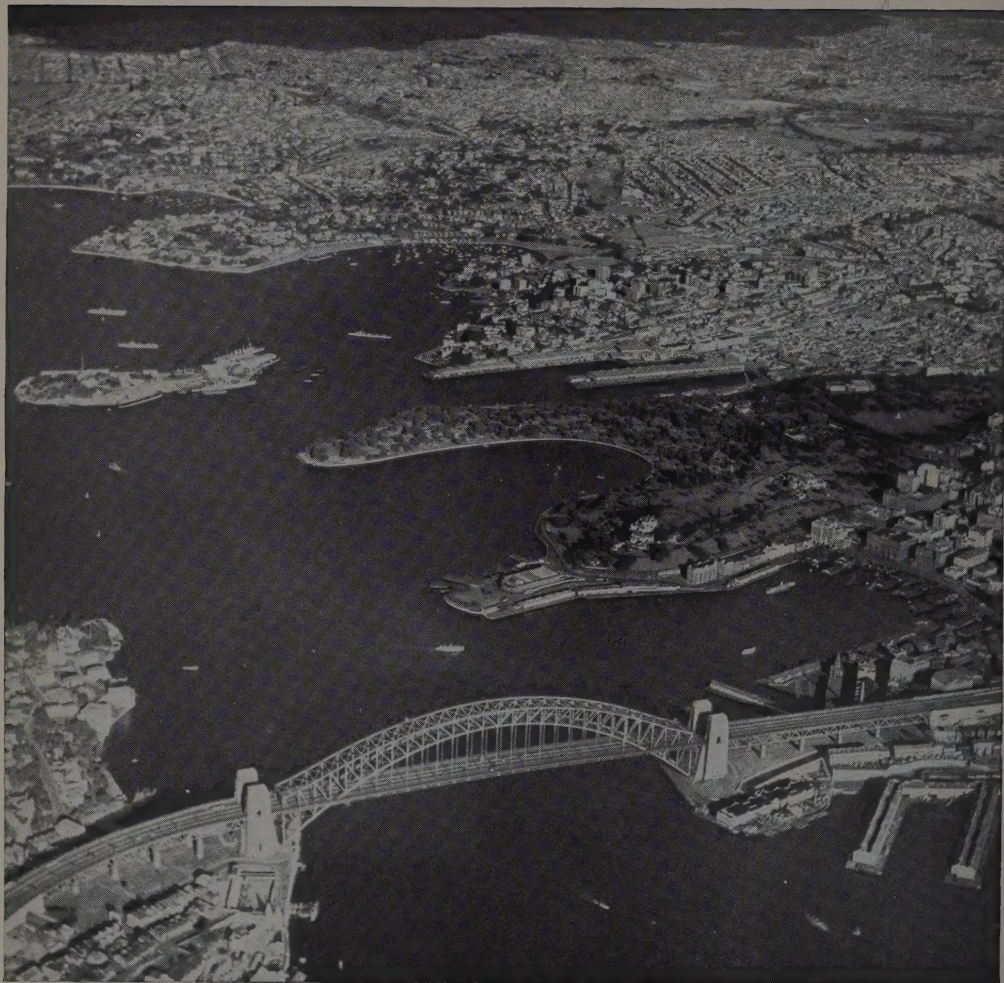
We have 'in the can' some hundred feet of 16mm. film, shot in a bathing pool where a friend was giving an impromptu exhibition of high-diving. Our original 'takes' include the diver climbing the ladder on his way up to the board; some shots from the board of the diver walking towards the camera; of him standing poised ready for the dive; of the dive, the action in mid-air and the final plunge. Other shots, made at random, show the splash as he entered the water, the appearance of his head and arms above the water and the easy movement of his arms and legs as he 'crawls' across the pool. Some of this material was shot in the order in which

it occurred. Some of the shots are from the same angle, but the majority are from different angles, the diver having made something like half a dozen dives, to suit the demands of the photographer.



The 'cameras' show the various angles of the 'takes'. The 'sequence' could be 'cut' to include the shots in lengths as indicated. Such a composition would help to reflect the 'rhythm' and drama of the 'story'. The high light of the dive itself is rendered in a quick rhythm, changing to a new and slower tempo as the diver swims across the pool. In 4/4 time the 'C' notes indicate the Cutting, the 'F' notes the rhythm of the action in the Film. The change to 3/4 time indicates where the expert swimmer starts to 'crawl' in the traditional 'waltz-time' action of this particularly rhythmic stroke.

The diagram published here indicates a suggested approach to the problem of 'cutting' or 'composing' these various ciné-snapshots of a 'diving sequence'. In cutting such a sequence the editor should endeavour to interpret filmically the act of diving as the ciné-director saw it and to fit the rhythm of the final 'composition' to the rhythm, both visible and 'psychological', of the original action.



An aerial view of Sydney.

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